DENON

Hi-Fi Component

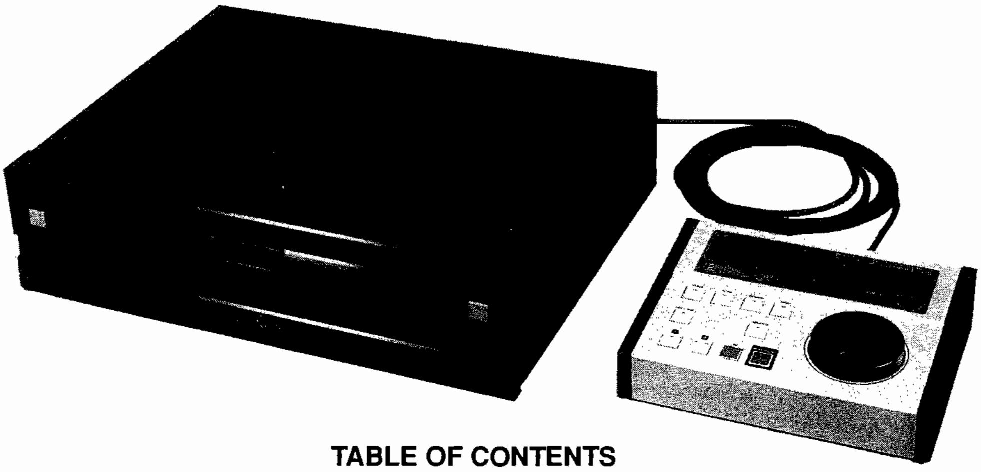
V11277

SERVICE MANUAL

MODEL DN-4000F

= CD4000

DOUBLE CD PLAYER



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NIPPON COLUMBIA CO., LTD.

IMPORTANT TO SAFETY

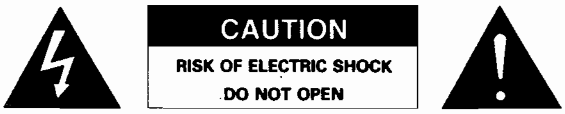
WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

1. **Handle the power supply cord carefully**
   Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing from wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.
2. **Do not open the top cover**
   In order to prevent electric shock, do not open the top cover.
   If problems occur, contact your DENON dealer.
3. **Do not place anything inside**
   Do not place metal objects or spill liquid inside the CD player. Electric shock or malfunction may result.

Please, record and retain the Model name and serial number of your set shown on the rating label.
Model No. DN-4000F Serial No. ____________


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT (BRITISH MODEL ONLY)

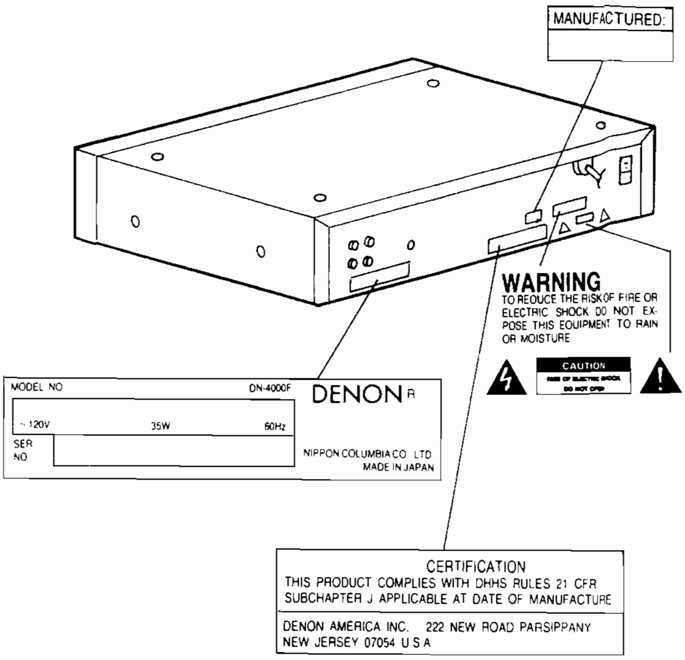
The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral Brown: Live

The colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

NOTE:
This CD player uses the semiconductor laser. To allow you to enjoy music at a stable operation, it is recommended to use this in a room of 5°C (41°F) – 35°C (95°F).

LABELS (for U.S.A. model only)


MANUFACTURED:
WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
MODEL NO
DN-4000F
DENON R
~120V
35W
60Hz
SER NO
NIPPON COLUMBIA CO LTD
MADE IN JAPAN
CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE
DENON AMERICA INC. 222 NEW ROAD PARSIPPANY NEW JERSEY 07054 U S A

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR REFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

NOTE:
This unit may cause interference to radio and television reception if you do not operate it in strict accordance with this OPERATING INSTRUCTIONS.

This unit complies with Class B computing device rules in accordance with the specifications in Sub-part J or Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. If the unit does cause interference to any radio or television reception, try to reduce it by one or more of the following means:

a) Turn the other unit to improve reception
b) Move this unit
c) Move this unit away from others
d) Plug this unit respectively into a different AC outlet

*** This is note in accordance with Section 15.838 of the FCC Rules.**

SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.

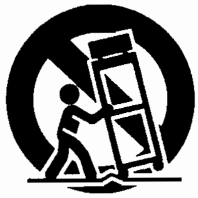
2. Retain Instructions – The safety and operating instructions should be retained for future reference.

3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions – All operating and use instructions should be followed.

5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.



6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

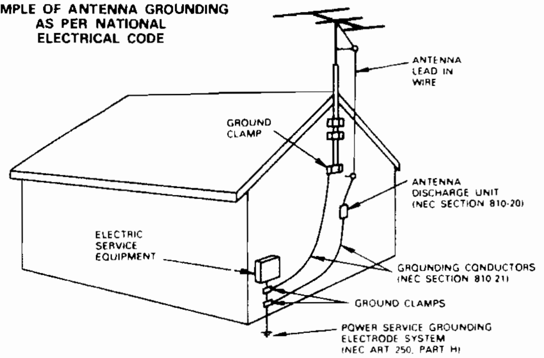
8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. Grounding or Polarization – The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

FIGURE A
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810 21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC - NATIONAL ELECTRICAL CODE

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Protective Attachment Plug – The appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.

15. Power Lines – An outdoor antenna should be located away from power lines.

16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70–1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:

   A. The power-supply cord or the plug has been damaged; or

   B. Objects have fallen, or liquid has been spilled into the appliance; or

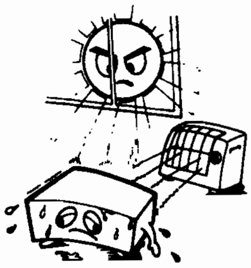
   C. The appliance has been exposed to rain; or

   D. The appliance does not appear to operate normally or exhibits a marked change in performance; or

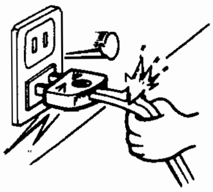
   E. The appliance has been dropped, or the enclosure damaged.

20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

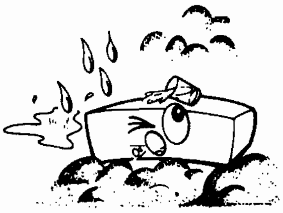
NOTE ON USE/HINWEISE ZUM GEBRAUCH/OBSERVATIONS RELATIVES A L'UTILISATION NOTE SULL'USO/NOTAS SOBRE EL USO/ALVORENS TE GEBRUIKEN/OBSERVERA



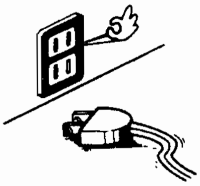
- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine zureichende Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte.
  Assicuratevi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas
  Permite la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen.
  Zorg voor een degelijk hitteafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.



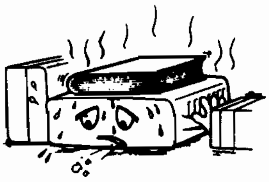
- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Manneggiate il filo di alimentazione con cura.
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteer het netsnoer voorzichtig.
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från eluttaget.



- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten för fukt, vatten och damm.

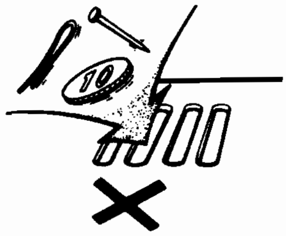


- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestate il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.

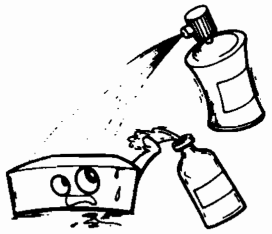


*(For sets with ventilation holes)

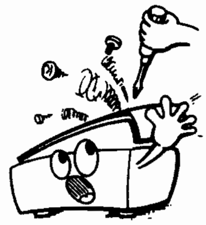
- Do not obstruct the ventilation holes.
- Die Belüftungsöffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación.
- De ventilatieopeningen mogen niet worden beblokkeerd.
- Täpp inte till ventilationsöppningarna.



- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.



- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevvi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Laat geen insektenverdelgende middelen, benzine of verfverdunner met dit apparaat in kontakt komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.



- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate mai, nè modificate l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nooit dit apparaat demonteren of op andere wijze modifiëren.
- Ta inte isär apparaten och försök inte bygga om den.

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This section describes the DN-4000F's features.

Features of the DN-4000F 6

[2] PREPARATIONS 7

This section describes the procedures from opening the case through the point when the DN-4000F is ready for use.

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2) Releasing the shipping lock screws 8
3) Connections 8
4) Mounting on a Rack 9
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[3] DESCRIPTION OF FUNCTIONS 10

This section includes detailed descriptions of the names and functions of the parts on the DN-4000F and RC-33 remote control unit. Refer to this section when using the DN-4000F and remote control unit for the first time and during use should you have any questions.

1) Names and functions of parts on main unit 10
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3) Description of remote control functions 12
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[4] BASIC OPERATION 18

This section describes the instructions for using the DN-4000F for mixing.

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2) Selecting the CD player 19
3) Selecting the track 19
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1 INTRODUCTION

Features of the DN-4000F

The DN-4000F is a double CD player for professional DJs. It offers excellent performance as well as ideal mixing functions for DJs, as described below.

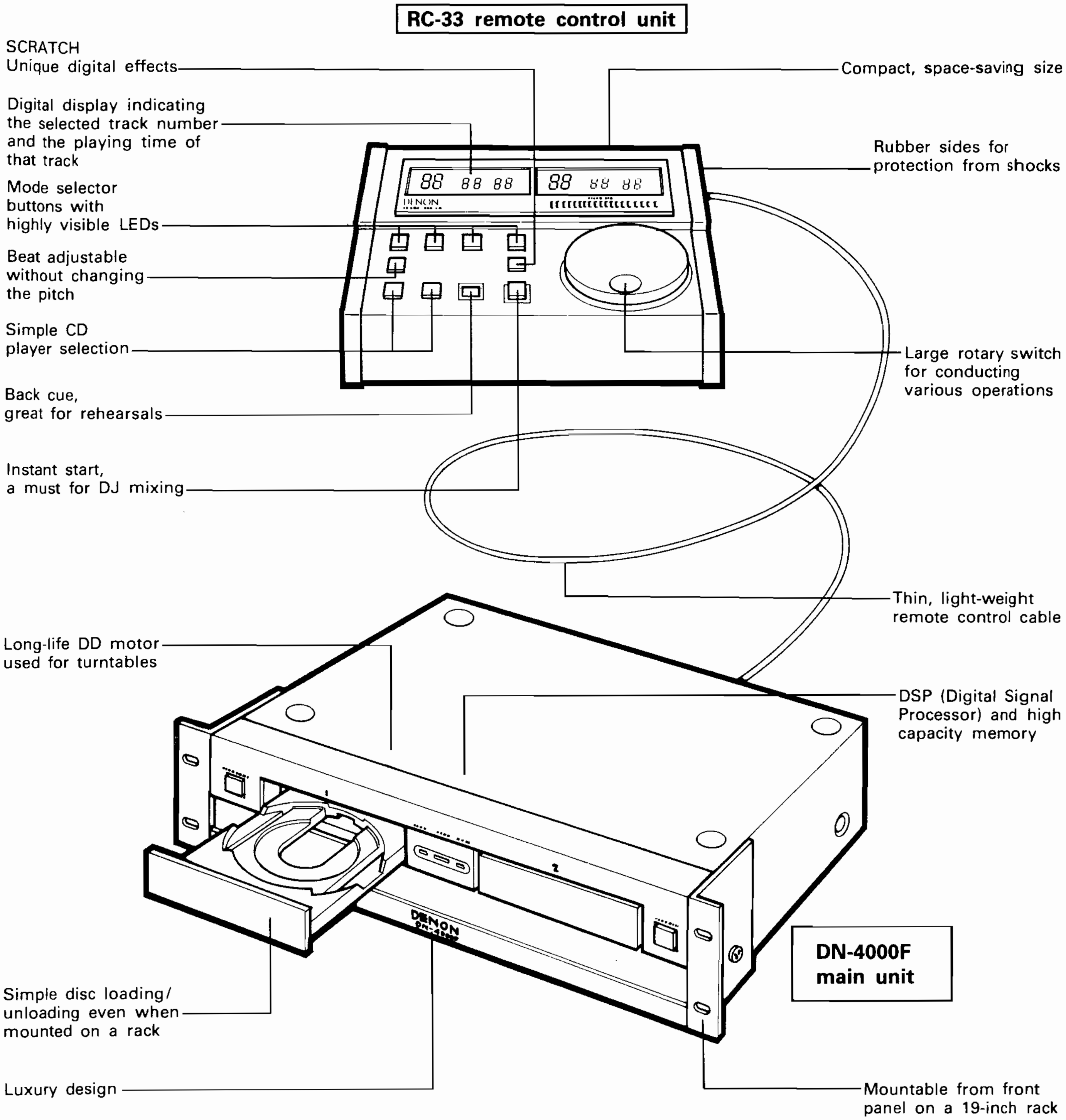

RC-33 remote control unit
SCRATCH Unique digital effects
Compact, space-saving size
Digital display indicating the selected track number and the playing time of that track
Rubber sides for protection from shocks
Mode selector buttons with highly visible LEDs
Beat adjustable without changing the pitch
Simple CD player selection
Large rotary switch for conducting various operations
Back cue, great for rehearsals
Instant start, a must for DJ mixing
Thin, light-weight remote control cable
Long-life DD motor used for turntables
DSP (Digital Signal Processor) and high capacity memory
DN-4000F main unit
Simple disc loading/ unloading even when mounted on a rack
Luxury design
Mountable from front panel on a 19-inch rack
DENON

Figure 1 – Features

2 PREPARATIONS

1) Checking the Contents

The following parts should be included in the carton case. Check that none are missing.

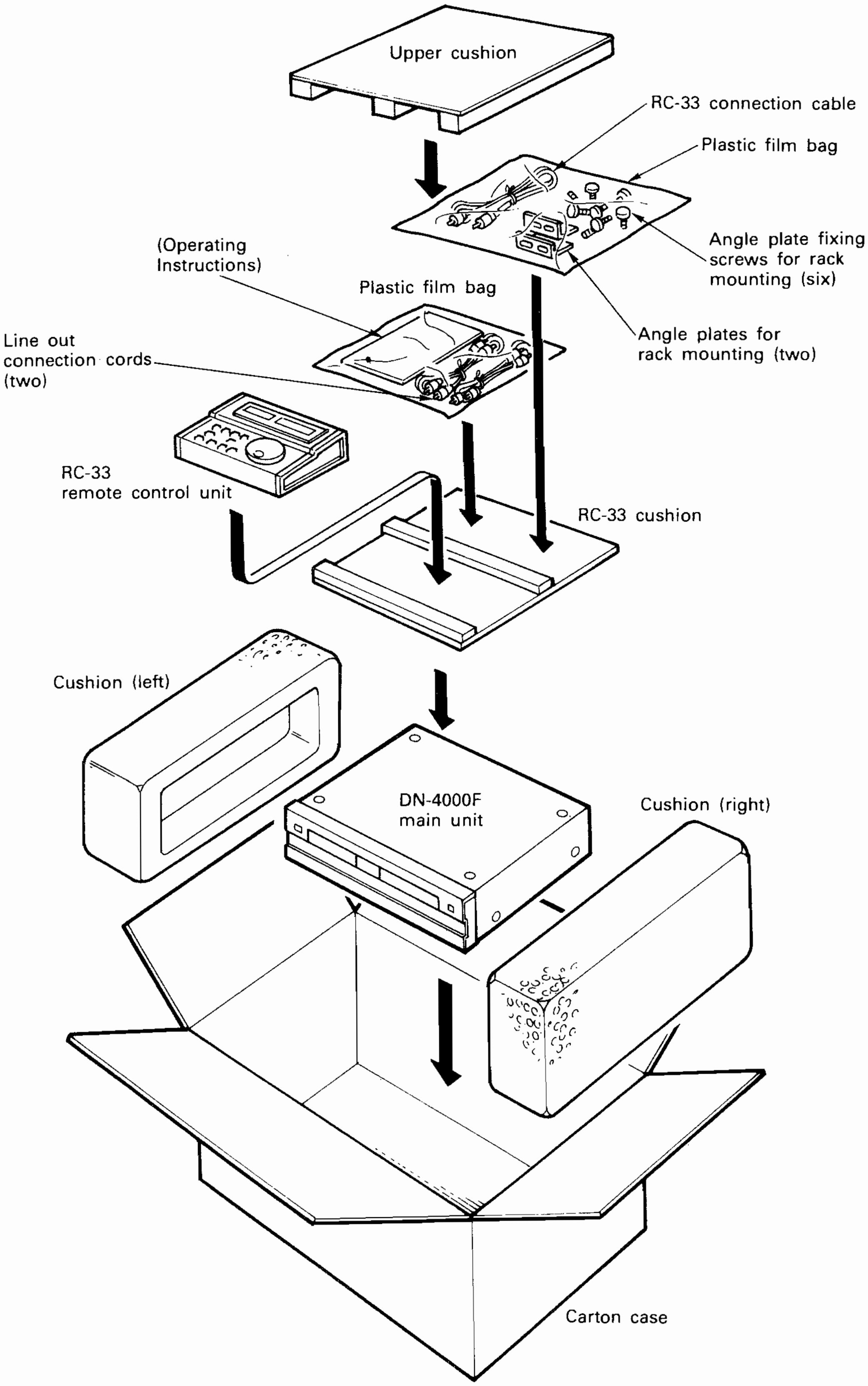

Upper cushion
RC-33 connection cable
Plastic film bag
Angle plate fixing screws for rack mounting (six)
(Operating Instructions)
Plastic film bag
Angle plates for rack mounting (two)
Line out connection cords (two)
RC-33 remote control unit
RC-33 cushion
Cushion (left)
DN-4000F main unit
Cushion (right)
Carton case

Figure 2 – Contents of Case

2) Releasing the shipping lock screws

These shipping lock screws have been tightened upon shipment from the factory to protect the CD player mechanisms from shocks during shipment. Release these screws before using the player.

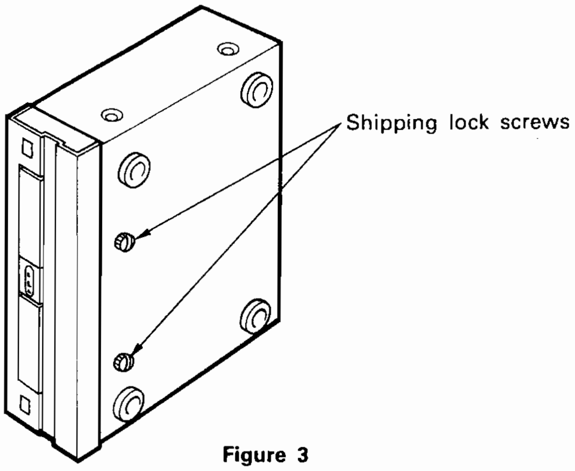

Shipping lock screws

Figure 3

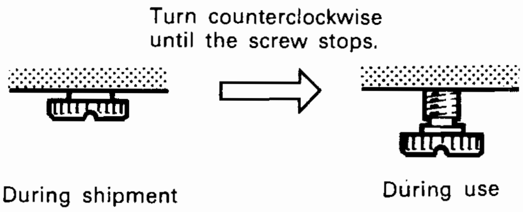

Turn counterclockwise until the screw stops.
During shipment
During use

Figure 4

3) Connections

The following shows a general example of connections to a mixing controller. Use this as reference.

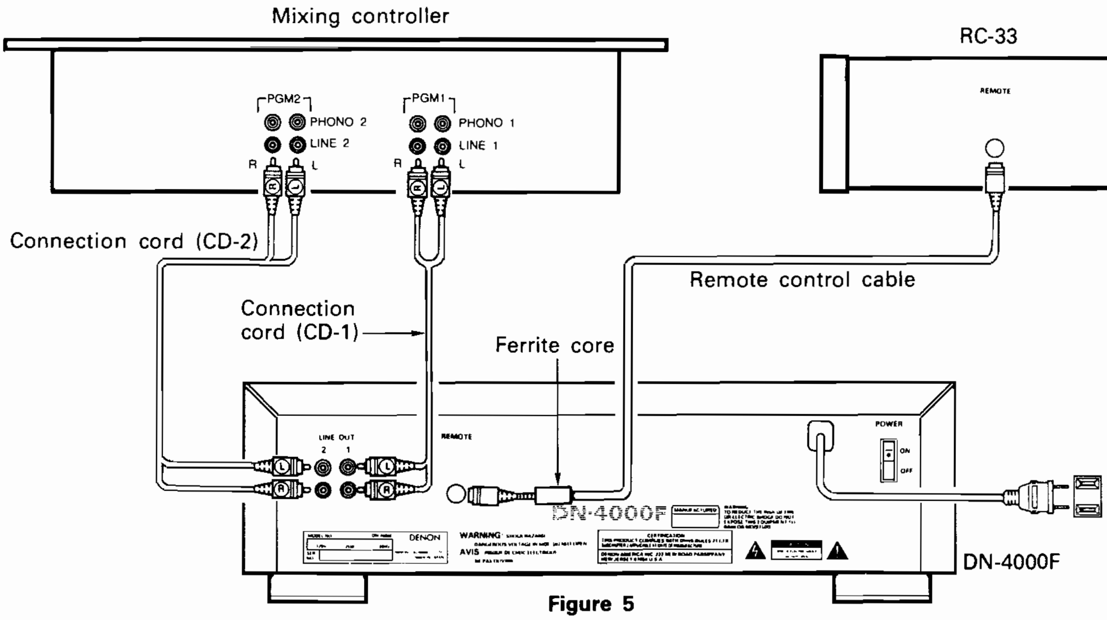

Mixing controller
PGM2
PHONO 2
LINE 2
R
L
PGM1
PHONO 1
LINE 1
R
L
RC-33
REMOTE
Connection cord (CD-2)
Remote control cable
Connection cord (CD-1)
Ferrite core
LINE OUT
2 1
REMOTE
POWER
ON
OFF
DN-4000F
DENON
WARNING
AVIS
DN-4000F

Figure 5

- Connect the line out connection cords to the line input terminals on the mixing controller.
- Connect the side of the RC-33 connection cable with the ferrite core to the DN-4000F.
- The line out connection cords and RC-33 connection cable are included with the DN-4000F.

4) Mounting on a Rack

The included rack mount angle plates must be attached when mounting the DN-4000F on a 19-inch rack.

① Remove the left and right side covers.

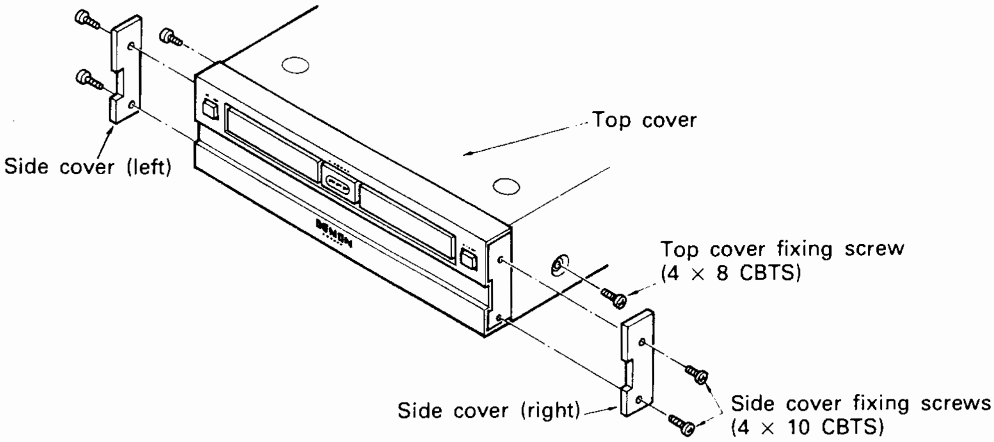

Top cover
Side cover (left)
Top cover fixing screw
(4 × 8 CBTS)
Side cover (right)
Side cover fixing screws
(4 × 10 CBTS)

Figure 6

② Attach the rack mount angle plates. These plates are included with the DN-4000F. (Refer to "[2]-1 Checking the Contents" on page 7.)

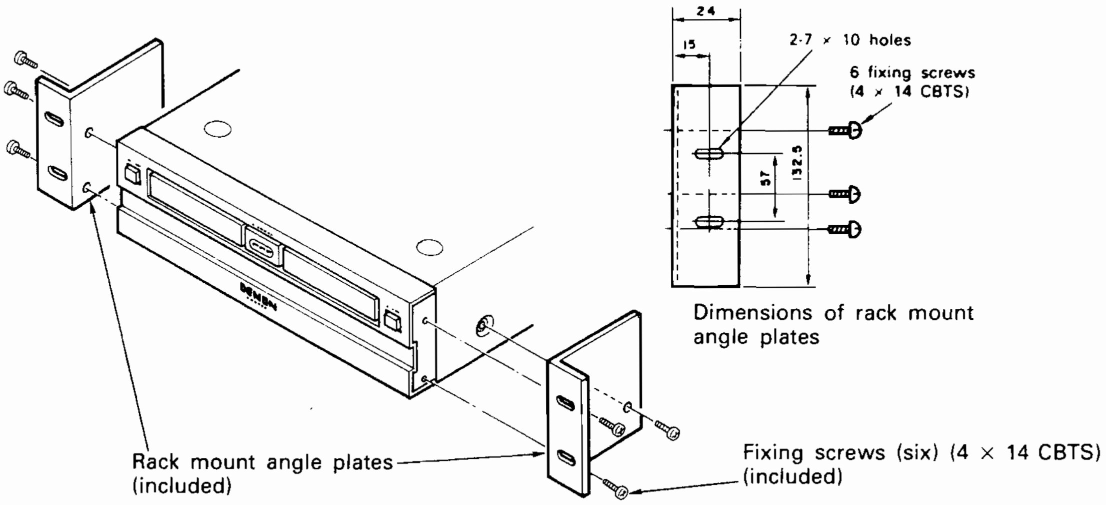

24
15
2-7 × 10 holes
6 fixing screws
(4 × 14 CBTS)
57
132.5
Dimensions of rack mount angle plates
Rack mount angle plates
(included)
Fixing screws (six) (4 × 14 CBTS)
(included)

Figure 7

5) Transporting the DN-4000F

When transporting the DN-4000F off the rack (or in a carrying case), tighten the shipping lock screws to protect the CD player mechanisms from shocks.

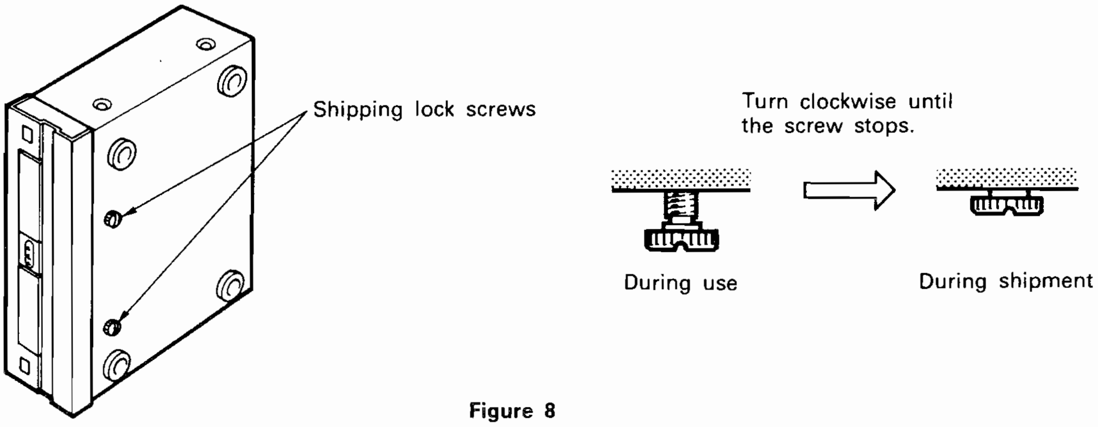

Shipping lock screws
Turn clockwise until
the screw stops.
During use
During shipment

Figure 8

3 DESCRIPTION OF FUNCTIONS

This section describes the names and functions of the parts on the main unit.

1) Names and Functions of Parts on Main Unit

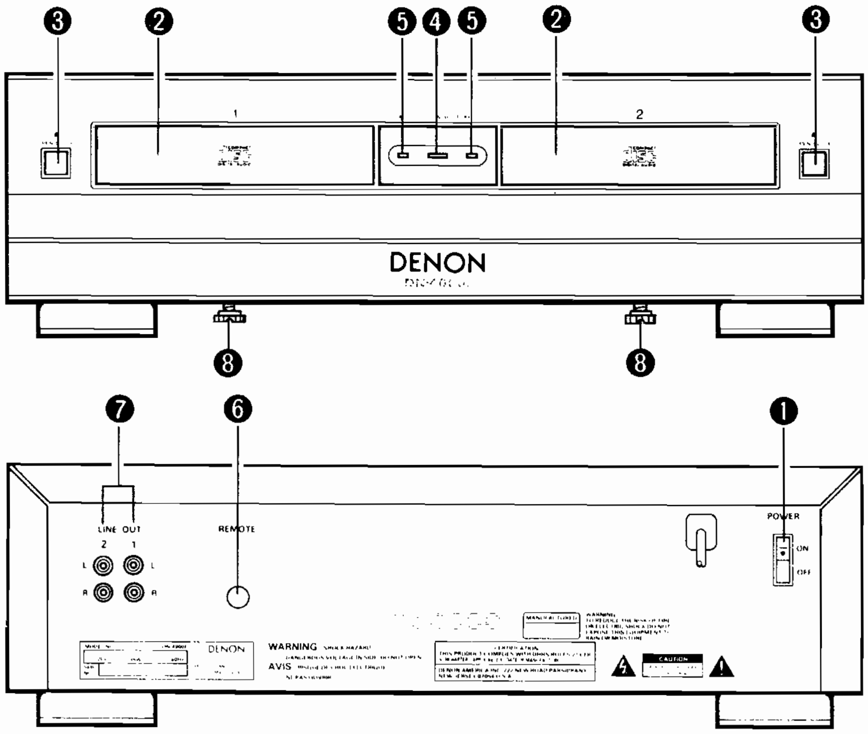


Figure 9

❶ **POWER switch**
This turns the power of the DN-4000F and remote control unit on and off. When on, the POWER indicator ❹ is lit.

❷ **Disc holders**
These are where the CDs are loaded. Press the OPEN/CLOSE buttons ❸ to open and close them.
Set the CDs securely in the guides.

❸ **OPEN/CLOSE buttons**
Press these to open and close the disc holders ❷.

❹ **POWER indicator**
This LED (red) lights when the POWER switch ❶ is turned on.

❺ **PLAY/CUE indicators**
These LEDs indicate the operating status of the CD players. Two-color LEDs are used to indicate three different statuses, depending on whether the LED is off, red or green.

Off	No CD loaded.
Red	When no sound signals are being output (during such operations as track selection, cuing, etc.)
Green	When sound signals are being output (during such operations as playback, scanning, searching, etc.)

In addition, the LEDs flash in the respective color when the MULTI SHUTTLE control is being turned.

❻ **REMOTE connector**
Connect the RC-33 remote control unit connector cable here. Insert the cable securely up to the hilt.

❼ **Line out terminals**
The audio signals from the CD players are output from these terminals. Connect them to the line input terminals on the mixing controller using the included connection cords. Be sure the connections are proper, 1 to 1, 2 to 2 and left to left, right to right. Refer to "2 -3 Connections" on page 8.

❽ **Shipping lock screws**
These screws should be locked during shipping.

2) Names of Parts on Remote Control Unit (RC-33)

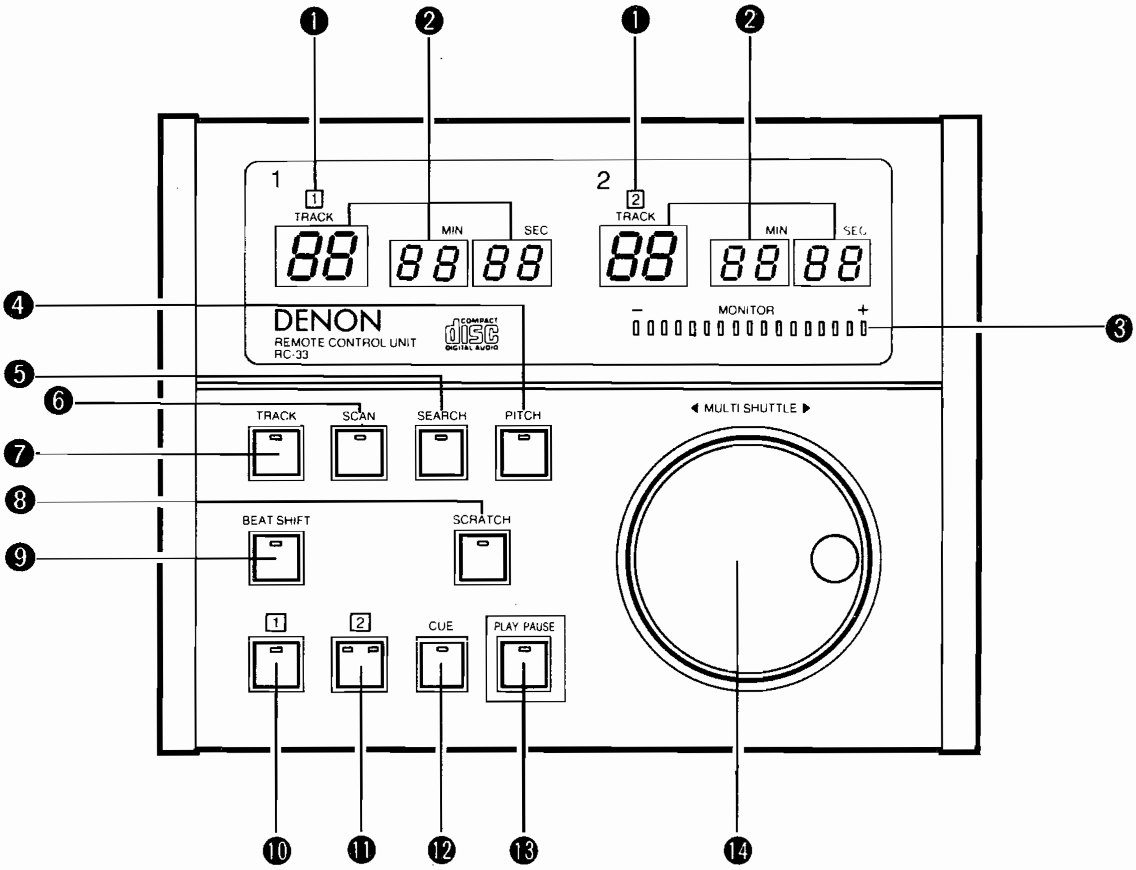

❶
❷
❶
❷
1
2
TRACK
MIN
SEC
88
88
88
DENON
REMOTE CONTROL UNIT
RC-33
MONITOR
−
+
❸
❹
❺
❻
❼
❽
❾
TRACK
SCAN
SEARCH
PITCH
◀ MULTI SHUTTLE ▶
BEAT SHIFT
SCRATCH
CUE
PLAY PAUSE
❿
⓫
⓬
⓭
⓮

Figure 10

- ❶ Player select indicators (CD-1 and CD-2)
- ❷ Track number and time displays (CD-1 and CD-2)
- ❸ MONITOR display
- ❹ PITCH button
- ❺ SEARCH button
- ❻ SCAN button
- ❼ TRACK button
- ❽ SCRATCH button
- ❾ BEAT SHIFT button
- ❿ CD-1 select button
- ⓫ CD-2 select button
- ⓬ CUE button
- ⓭ PLAY/PAUSE button
- ⓮ MULTI SHUTTLE control

3) Description of Remote Control Functions

This sections describes the functions of the RC-33.

① Player selection ([1] or [2])

All operations on either CD-1 or CD-2 are possible using the RC-33. The CD player is selected using the [1] and [2] buttons (❿ and ⓫ in Figure 10). When selected, the LED(s) on the button and the corresponding player select indicator at the top of the RC-33 (❶ in Figure 10) lights. When the power is first turned on or after CDs are loaded, neither player is selected, so operation is not possible from the RC-33. First press a CD select button whose LED is flashing to select the CD player.

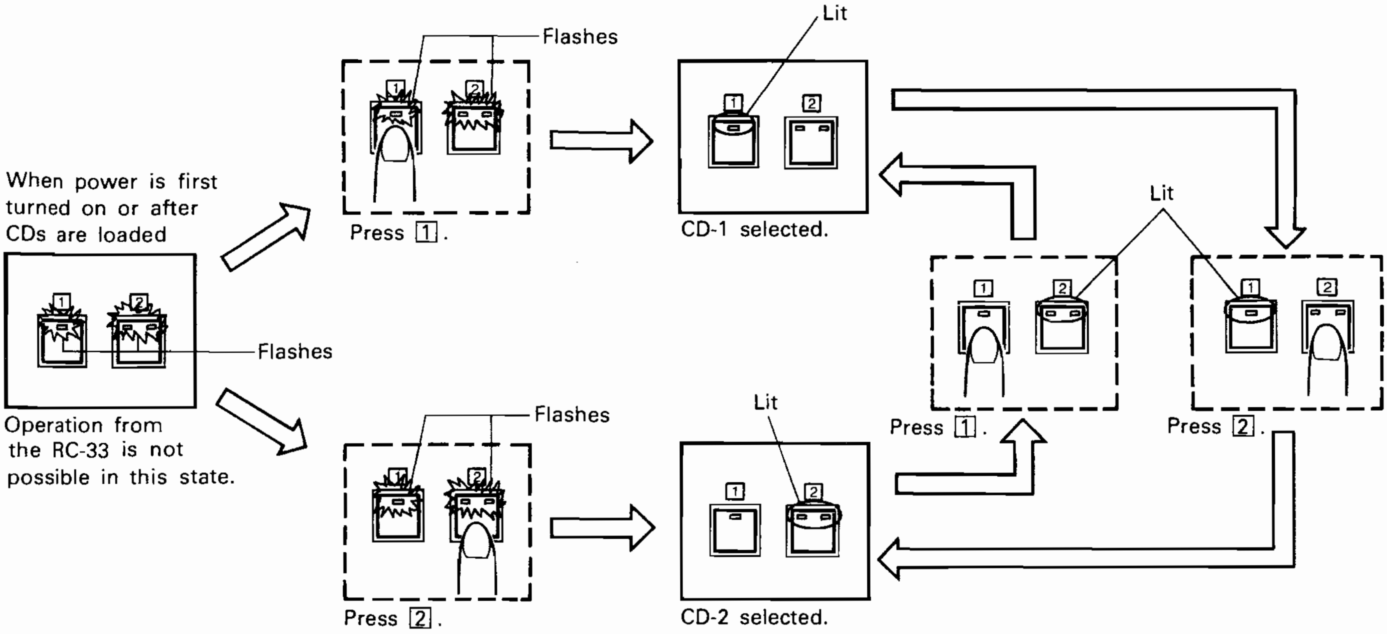

Flashes
Lit
When power is first turned on or after CDs are loaded
1
2
Flashes
Operation from the RC-33 is not possible in this state.
Press [1].
CD-1 selected.
Lit
Press [1].
Press [2].
Flashes
Lit
Press [2].
CD-2 selected.

Figure 11

② Modes (TRACK, SCAN, SEARCH and PITCH)

The DN-4000F has four modes, track, scan, search and pitch. Select the mode as required. The modes have the functions described below.

Track mode – This mode is for selecting the track to be played. Turn the MULTI SHUTTLE control to select a new track and search for the position from which playback is to start. Refer to page 13.

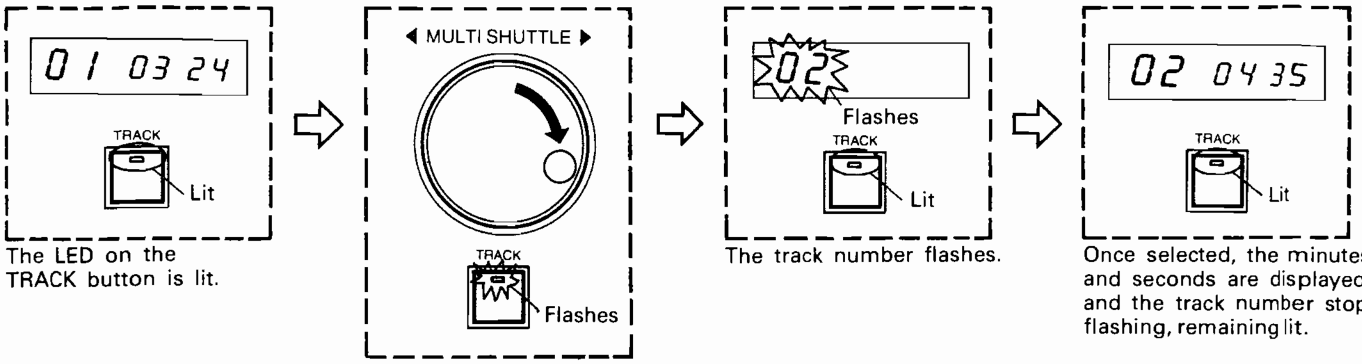
Scan mode – This mode is used to move the optical pick-up forward or backward while listening to the sound. Turn the MULTI SHUTTLE control to change the scanning speed. Refer to page 13.

Search mode – This mode is used to accurately set the position from which playback is to begin. When the MULTI SHUTTLE control is turned, the position of the sound changes according to the angle by which the control is turned. Refer to page 14.

Pitch mode – This mode is used to change the playback pitch. Turn the MULTI SHUTTLE control to change the pitch by up to 10% in either direction. Refer to page 14.

Track mode

The following shows what happens when the MULTI SHUTTLE control is turned in the track mode.


01 03 24
TRACK
Lit
◀ MULTI SHUTTLE ▶
TRACK
Flashes
02
Flashes
TRACK
Lit
02 04 35
TRACK
Lit

The LED on the TRACK button is lit.

The LED on the TRACK button flashes when the MULTI SHUTTLE control is turned.

The track number flashes.

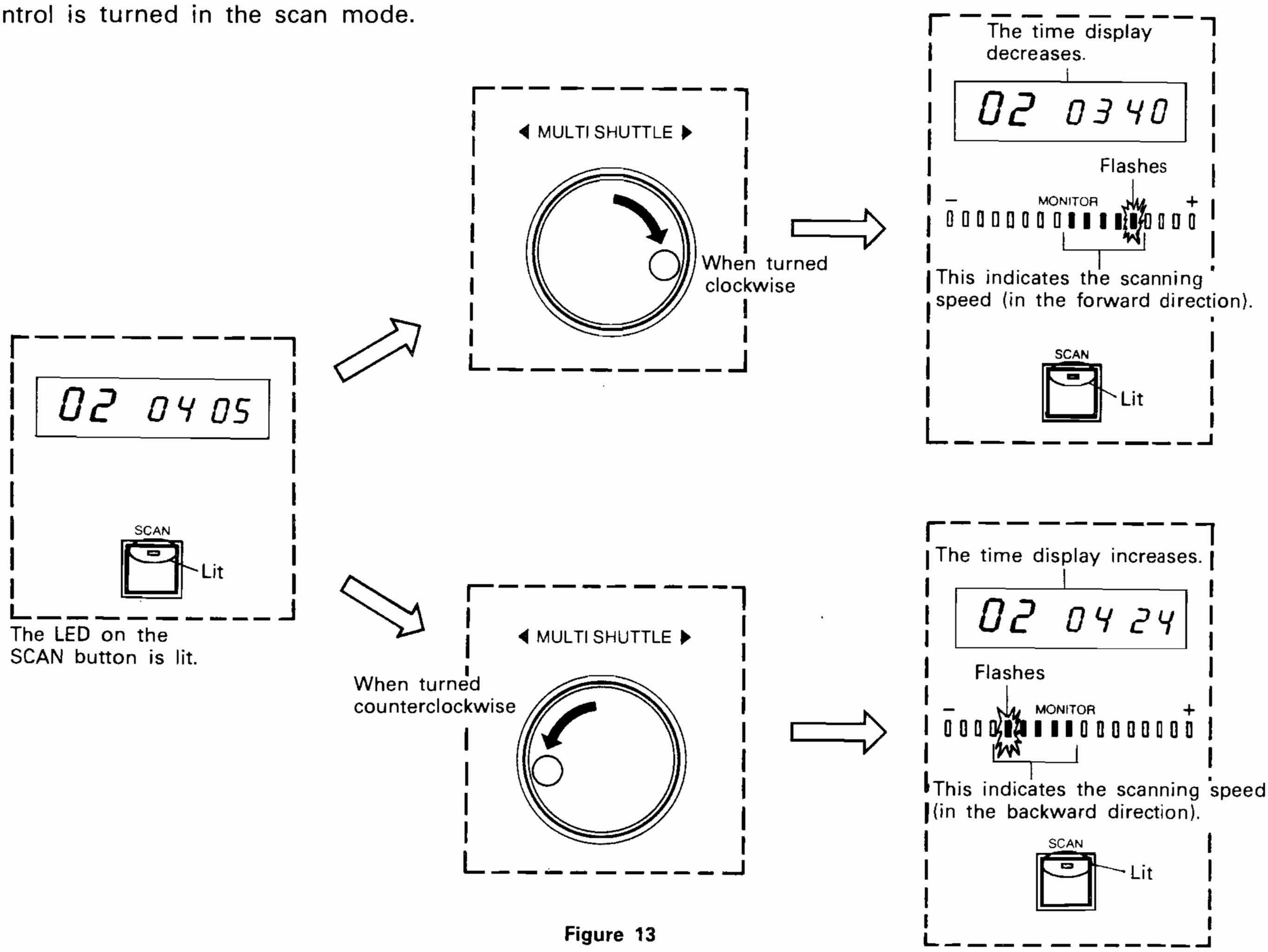
Once selected, the minutes and seconds are displayed and the track number stops flashing, remaining lit.

Figure 12

The LED on the TRACK button flashes while the MULTI SHUTTLE control is being turned.

Scan mode

The following shows what happens when the MULTI SHUTTLE control is turned in the scan mode.


02 04 05
SCAN
Lit
◀ MULTI SHUTTLE ▶
When turned clockwise
02 03 40
Flashes
–
MONITOR
+
SCAN
Lit
◀ MULTI SHUTTLE ▶
When turned counterclockwise
02 04 24
Flashes
–
MONITOR
+
SCAN
Lit

The LED on the SCAN button is lit.

The time display decreases.

This indicates the scanning speed (in the forward direction).

The time display increases.

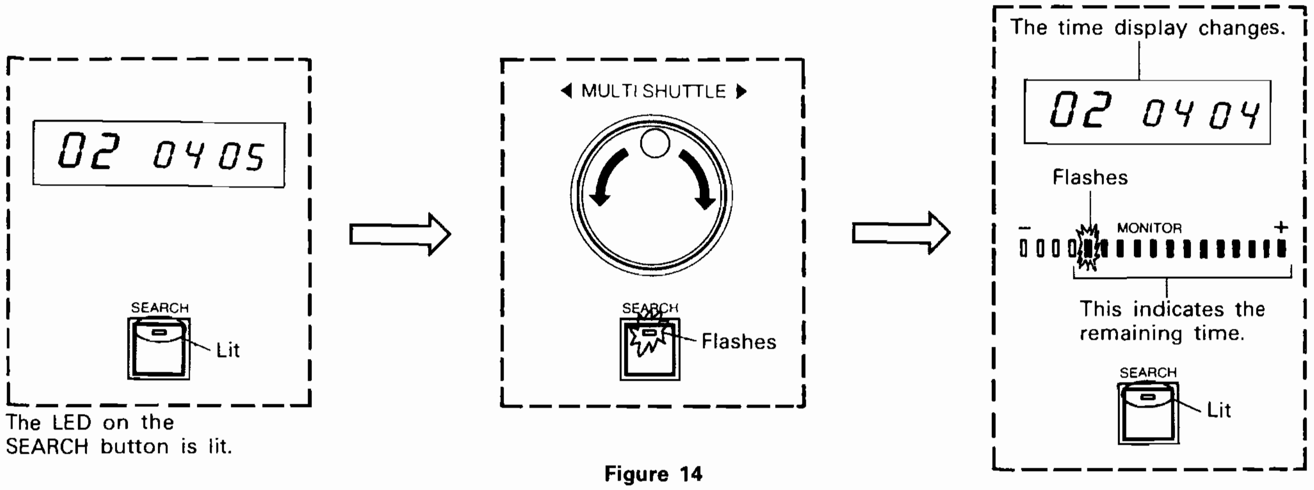
This indicates the scanning speed (in the backward direction).

Figure 13

- The LED on the SCAN button flashes while the MULTI SHUTTLE control is being turned.
- The scanning speed can be changed in six steps in both the forward and backward directions by turning the MULTI SHUTTLE control.
- Scanning is not possible before the first track and after the last track on the disc.
- The MONITOR display indicates the scanning direction and speed. Refer to "3-3-⑧ MONITOR display" on page 17.

Search mode

The following shows what happens when the MULTI SHUTTLE control is turned in the search mode.


02 0405
SEARCH
Lit
MULTI SHUTTLE
SEARCH
Flashes
The time display changes.
02 0404
Flashes
–
MONITOR
+
This indicates the remaining time.
SEARCH
Lit

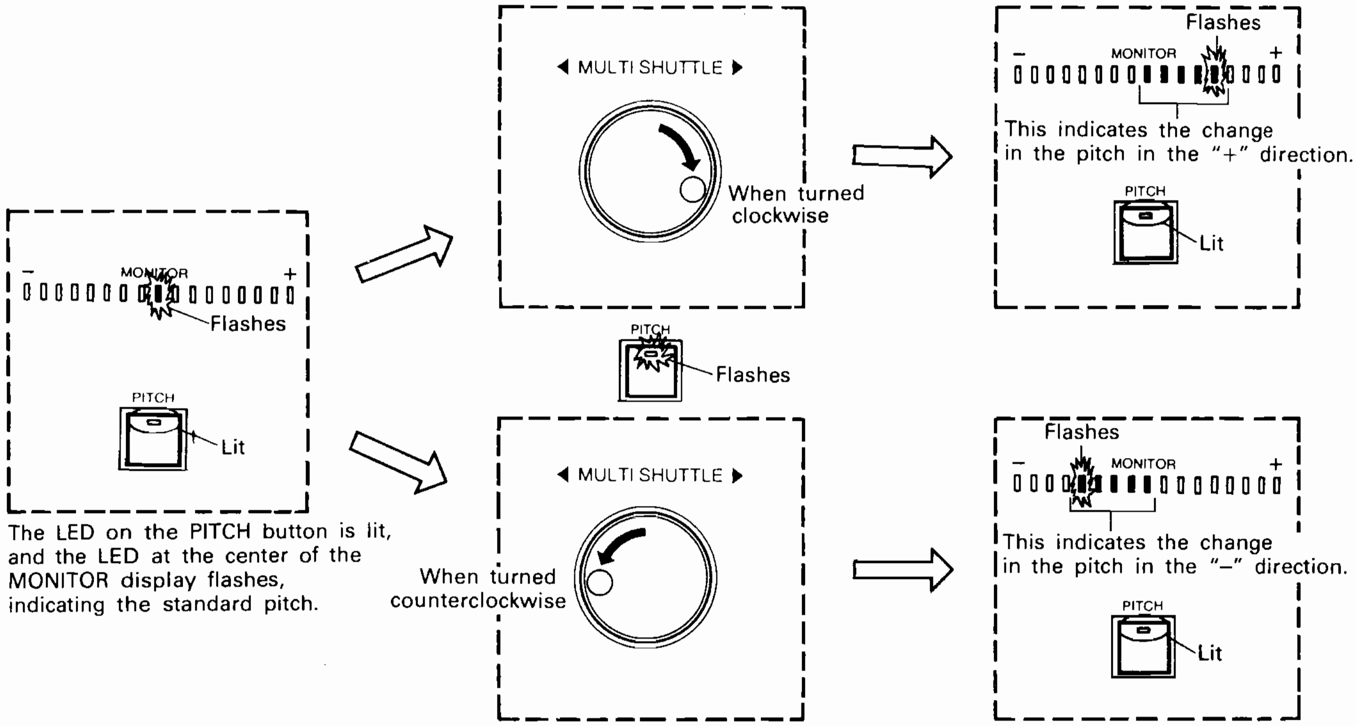
The LED on the SEARCH button is lit.

Figure 14

- The LED on the SEARCH button flashes while the MULTI SHUTTLE control is being turned.
- Searching is not possible before the first track and after the last track on the disc.
- The MONITOR display indicates the remaining time. With the total time for the track displayed corresponding to all of the LEDs on the MONITOR display, the number of LEDs which are lit correspond to the remaining time. Refer to " 3 -3-⑧ MONITOR display" on page 17.

Pitch mode

The following shows what happens when the MULTI SHUTTLE control is turned in the pitch mode.


–
MONITOR
+
Flashes
PITCH
Lit
MULTI SHUTTLE
When turned clockwise
PITCH
Flashes
MULTI SHUTTLE
When turned counterclockwise
Flashes
–
MONITOR
+
This indicates the change in the pitch in the "+" direction.
PITCH
Lit
Flashes
–
MONITOR
+
This indicates the change in the pitch in the "–" direction.
PITCH
Lit

The LED on the PITCH button is lit, and the LED at the center of the MONITOR display flashes, indicating the standard pitch.

Figure 15

- The LED on the PITCH button flashes while the MULTI SHUTTLE control is being turned.
- The pitch increases when the MULTI SHUTTLE control is turned clockwise, and decreases when it is turned counterclockwise.
- The pitch is minimum when the LED on the far left side of the MONITOR display is flashing, and maximum when the LED on the far right side of the MONITOR display is flashing. Refer to " 3 -3-⑧ MONITOR display" on page 17.

③ Operating buttons (PLAY/PAUSE and CUE)

- Operation switches between the playback and pause modes each time the PLAY/PAUSE button is pressed. See figure 16.
- As playback on the DN-4000F is conducted via the DSP and memory, the sound is produced immediately after the PLAY/PAUSE button is pressed. (Instant start)
- When the CUE button is pressed during playback, playback returns to the position from which it started. (Back cue) See figure 17.

Figures 16 to 18 show typical examples of the operation when the PLAY/PAUSE and CUE buttons are pressed.

Playing and Pausing

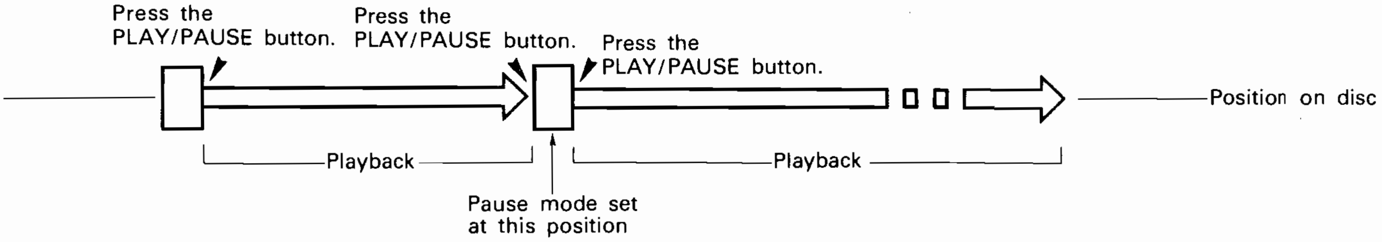

Press the PLAY/PAUSE button.
Press the PLAY/PAUSE button.
Press the PLAY/PAUSE button.
Position on disc
Playback
Playback
Pause mode set at this position

Figure 16

When the PLAY/PAUSE button is pressed, playback begins and continues as shown by the arrow in Figure 16. The pause mode is set when the PLAY/PAUSE button is pressed during playback, and playback resumes when the PLAY/PAUSE button is pressed again.

Playing and Cuing

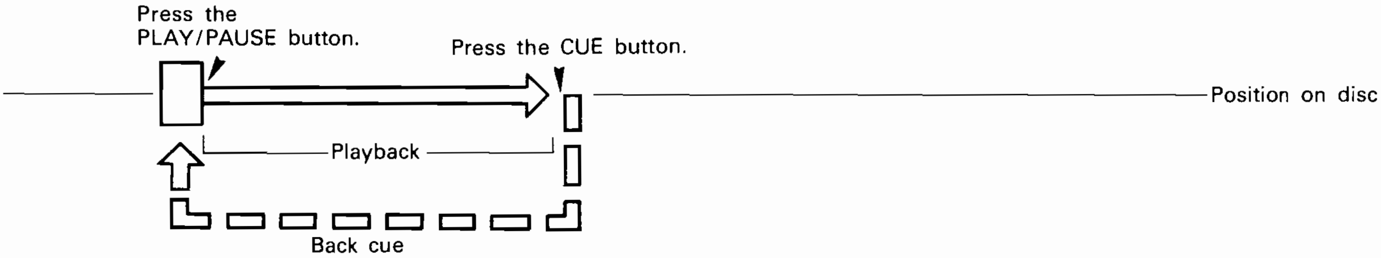

Press the PLAY/PAUSE button.
Press the CUE button.
Position on disc
Playback
Back cue

Figure 17

When the CUE button is pressed after the PLAY/PAUSE button has been pressed and the disc is playing, the optical pickup returns to the position at which playback started and is prepared for playback. Press the PLAY/PAUSE and CUE buttons alternately to start playback repeatedly from the same position.

Playing, Pausing and Cuing

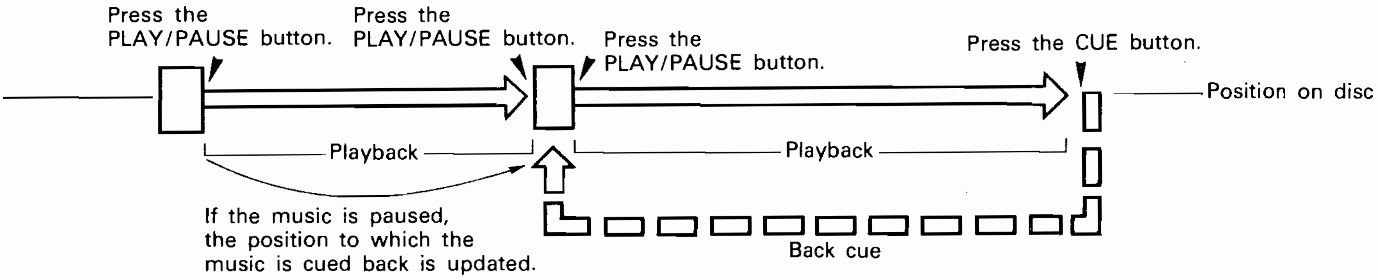

Press the PLAY/PAUSE button.
Press the PLAY/PAUSE button.
Press the PLAY/PAUSE button.
Press the CUE button.
Position on disc
Playback
Playback
If the music is paused, the position to which the music is cued back is updated.
Back cue

Figure 18

④ Memory effects (BEAT SHIFT and SCRATCH)

- These are digital effects using the DN-4000F's DSP and memory.
- Beat shift is a function for digitally shifting the beat timing of the music playing on CD-1 and CD-2 to match them.
- Scratch is a function for creating an effect similar to scratch playing on vinyl records. The scratch is slow if the MULTI SHUTTLE control is turned slowly, and fast if the MULTI SHUTTLE control is turned quickly.

Beat Shift

In the following example, music with the same waveform is being played on CD-1 and CD-2, and the beat timing of CD-2 is shifted to match the beat timing of CD-1.

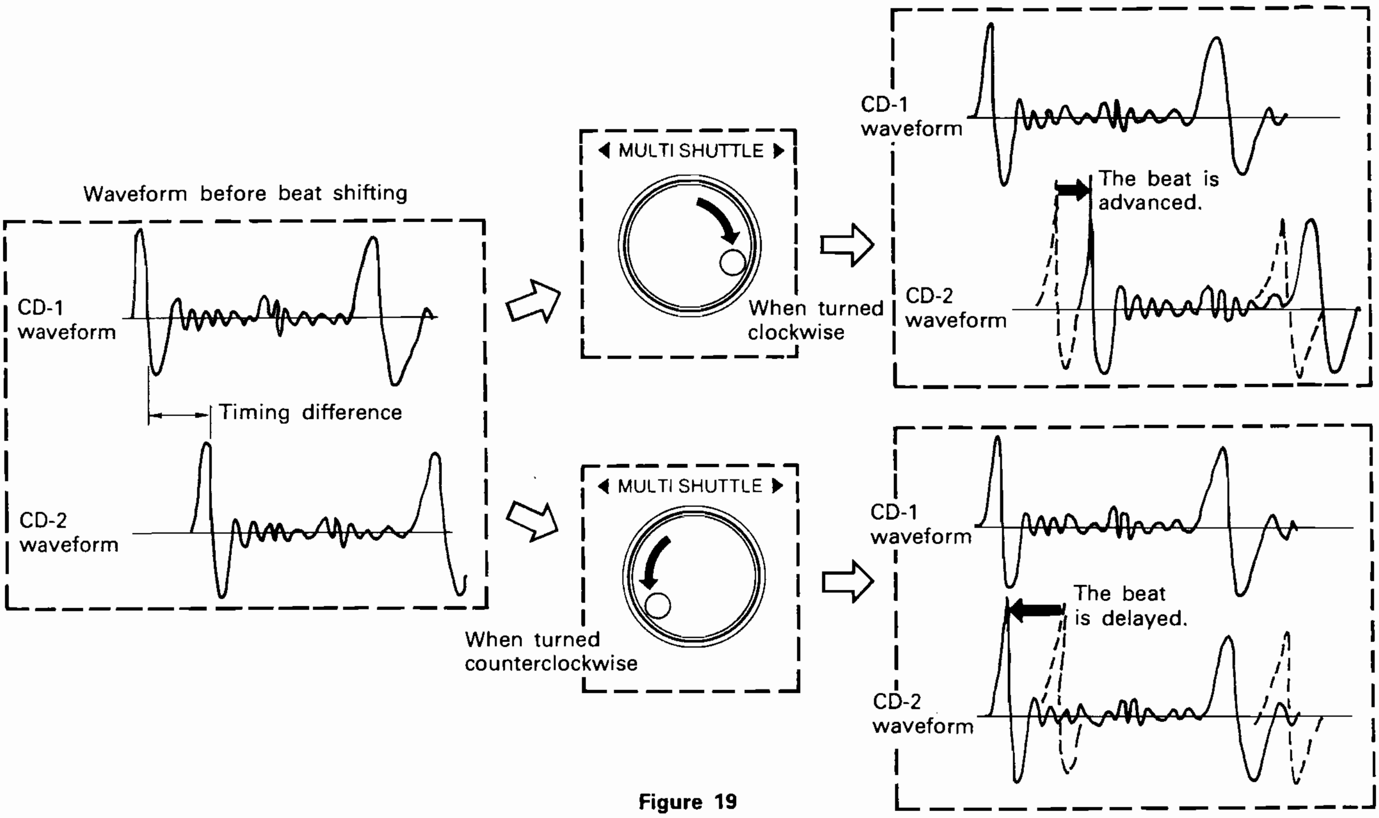

Waveform before beat shifting
CD-1 waveform
Timing difference
CD-2 waveform
◀ MULTI SHUTTLE ▶
When turned clockwise
◀ MULTI SHUTTLE ▶
When turned counterclockwise
CD-1 waveform
The beat is advanced.
CD-2 waveform
CD-1 waveform
The beat is delayed.
CD-2 waveform

Figure 19

⑤ MULTI SHUTTLE control

This is a digital rotary switch for inputting data according to the mode or effect which is set. Various functions can be used by turning this control clockwise and counterclockwise.

⑥ Player select indicators

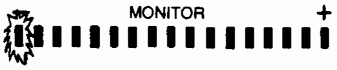
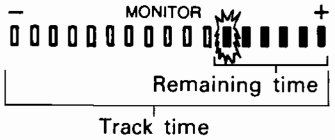
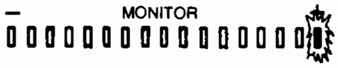
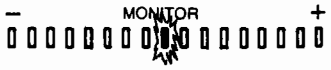
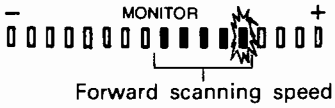
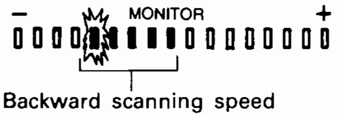
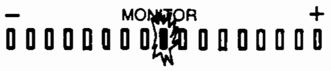
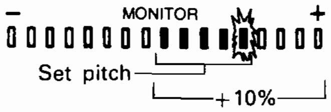
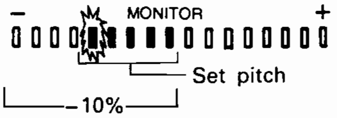
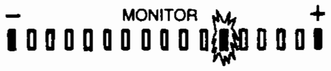
These LEDs indicate which player is selected, CD-1 or CD-2. Operations are performed on the player whose LED is lit. Press the CD select buttons ($\boxed{1}$ and $\boxed{2}$) to select the CD player. Refer to "$\boxed{3}$ -3-① Player Selection" on page 12.

⑦ Time display

The track, minutes and seconds are indicated separately for CD-1 and CD-2. The minutes and seconds indicate the remaining time for the indicated track.

⑧ MONITOR display

The MONITOR display indicates time information or settings selected with the MULTI SHUTTLE control. The display functions in different ways according to the mode which is set and the playback operation.

Mode or operation	Information indicated	MONITOR display	Description
Play, pause, cue and search modes	Time information		All of the LEDs are lit, and the disc is currently at the beginning of the track.
		 − MONITOR + Remaining time Track time	When the current position changes during playback or search, the LED which is flashing changes. The lit LEDs indicate the time remaining.
			In this case there is almost no time remaining.
Scan mode	Direction and speed of scanning		The speed is 0. In other words, the player is not scanning.
		 − MONITOR + Forward scanning speed	This indicates that scanning is being performed in the forward direction. The number of LEDs lit indicates the scanning speed.
		 − MONITOR + Backward scanning speed	This indicates that scanning is being performed in the backward direction. The number of LEDs lit indicates the scanning speed.
Pitch mode	Pitch		This indicates that the standard pitch is set.
		 − MONITOR + Set pitch +10%	The pitch has been set to the "+" side. When the LED at the far right is flashing, the pitch is 10% faster than the standard pitch.
		 − MONITOR + Set pitch −10%	The pitch has been set to the "−" side. When the LED at the far left is flashing, the pitch is 10% slower than the standard pitch.
Beat shift mode	Range for which the beat can be shifted		The flashing LED indicates the beat shift position currently set. The beat can be shifted until the LED at either extreme flashes.

Symbols: ▮ – lit

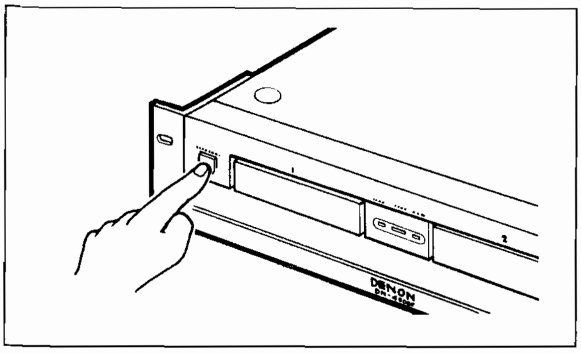
✳ – flashing

Table 1

4 BASIC OPERATION

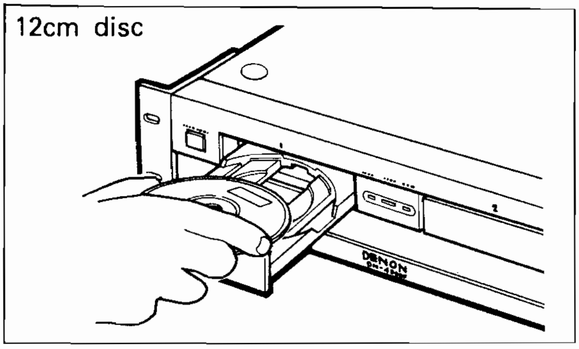
This section describes the procedure for basic operation.

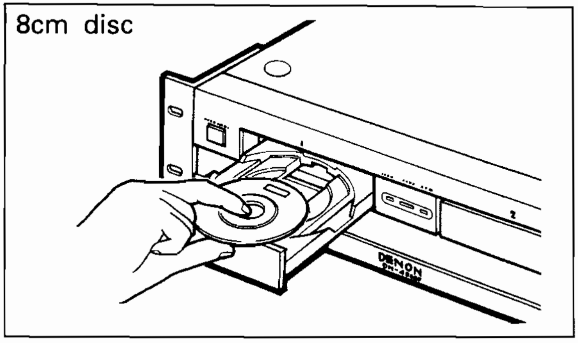
1) Loading and unloading discs

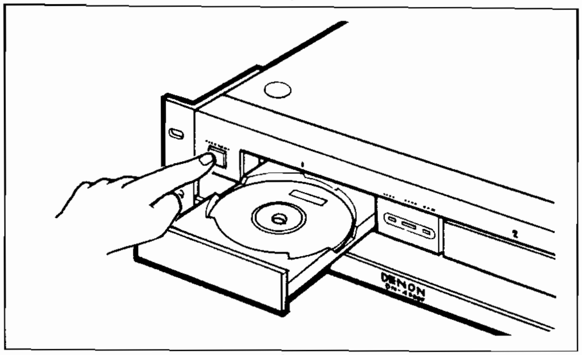


Open the disc holder.
When the disc holder is closed, press the OPEN/CLOSE button to open it.

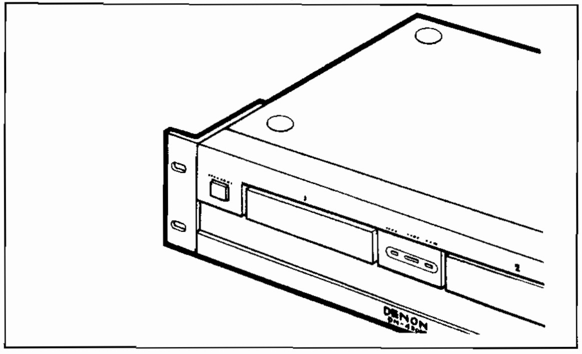
Set the disc in the disc holder.







Press the OPEN/CLOSE button to close the disc holder.



The disc holder closes and preparations for playback begin.

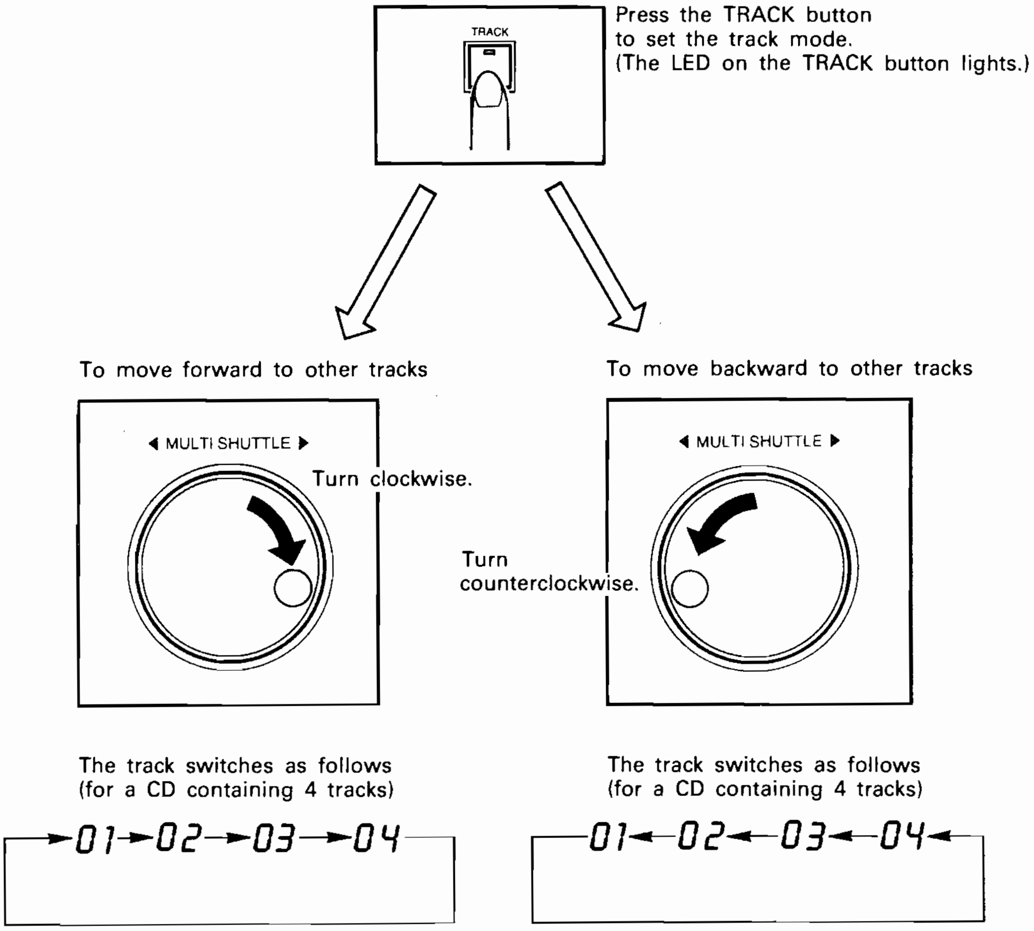
Figure 20

2) Selecting the CD player

① When the discs are loaded after the power is turned on, the player select indicator(s) for the player(s) in which a disc is loaded and the LED(s) on the corresponding CD select button flash, indicating that the player(s) can be selected.
Press the CD select button for the player to be operated. The indicator stops flashing, remaining lit, indicating that the player is selected. A player cannot be selected if no disc is loaded in it.

② When there are CDs in both players and the CD select button for the player which is not selected is pressed, the new player is selected.

3) Selecting the track



Press the TRACK button
to set the track mode.
(The LED on the TRACK button lights.)

To move forward to other tracks

Turn clockwise.

The track switches as follows
(for a CD containing 4 tracks)

To move backward to other tracks

Turn
counterclockwise.

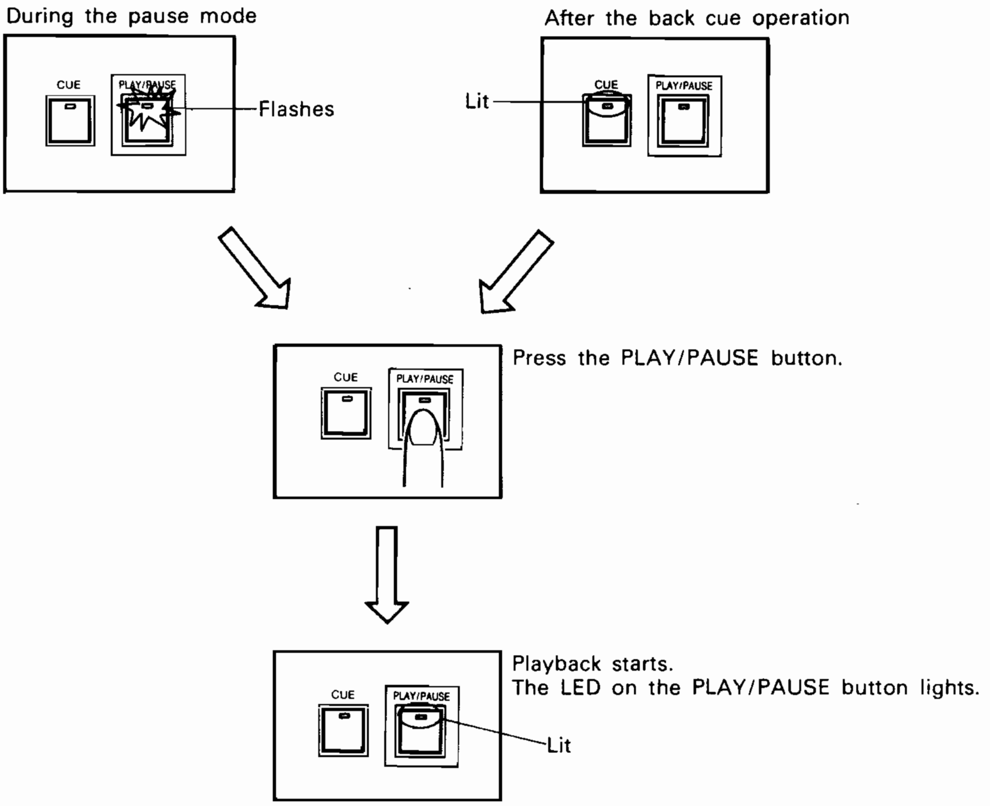
The track switches as follows
(for a CD containing 4 tracks)

Figure 21

- If a new track is selected during playback, it starts playing automatically as soon as the track selection operation is completed.
- The track display flashes on the time display while the track selection operation is being performed.

4) Starting playback

Playback starts when the PLAY/PAUSE button is pressed during the pause mode or after the back cue operation. Playback starts immediately with no time delay, so tracks are switched smoothly.


CUE
PLAY/PAUSE
Flashes
Lit
CUE
PLAY/PAUSE
CUE
PLAY/PAUSE
CUE
PLAY/PAUSE
Lit

During the pause mode

After the back cue operation

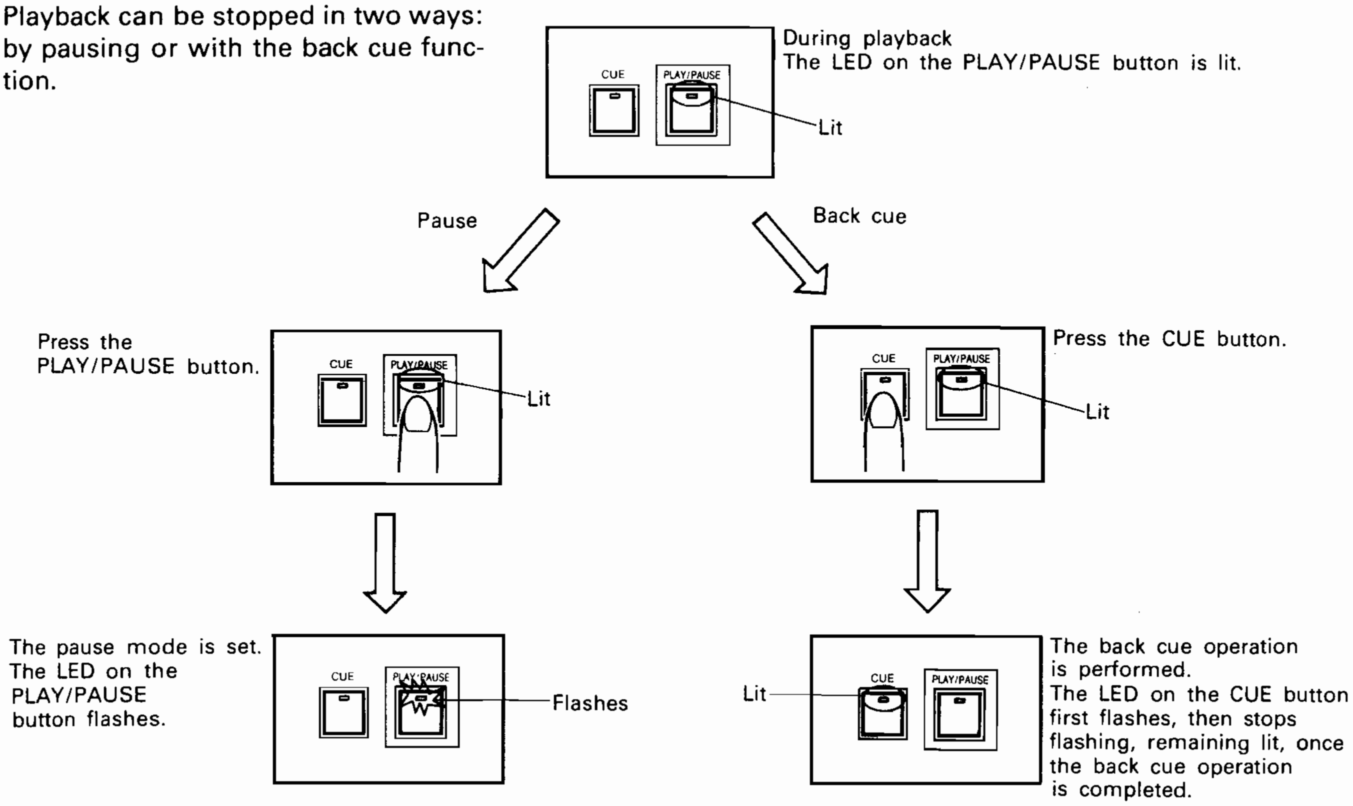
Press the PLAY/PAUSE button.

Playback starts.
The LED on the PLAY/PAUSE button lights.

Figure 22

5) Stopping playback

Playback can be stopped in two ways: by pausing or with the back cue function.


CUE
PLAY/PAUSE
Lit
Pause
Back cue
CUE
PLAY/PAUSE
Lit
CUE
PLAY/PAUSE
Lit
CUE
PLAY/PAUSE
Flashes
Lit
CUE
PLAY/PAUSE

During playback
The LED on the PLAY/PAUSE button is lit.

Press the PLAY/PAUSE button.

Press the CUE button.

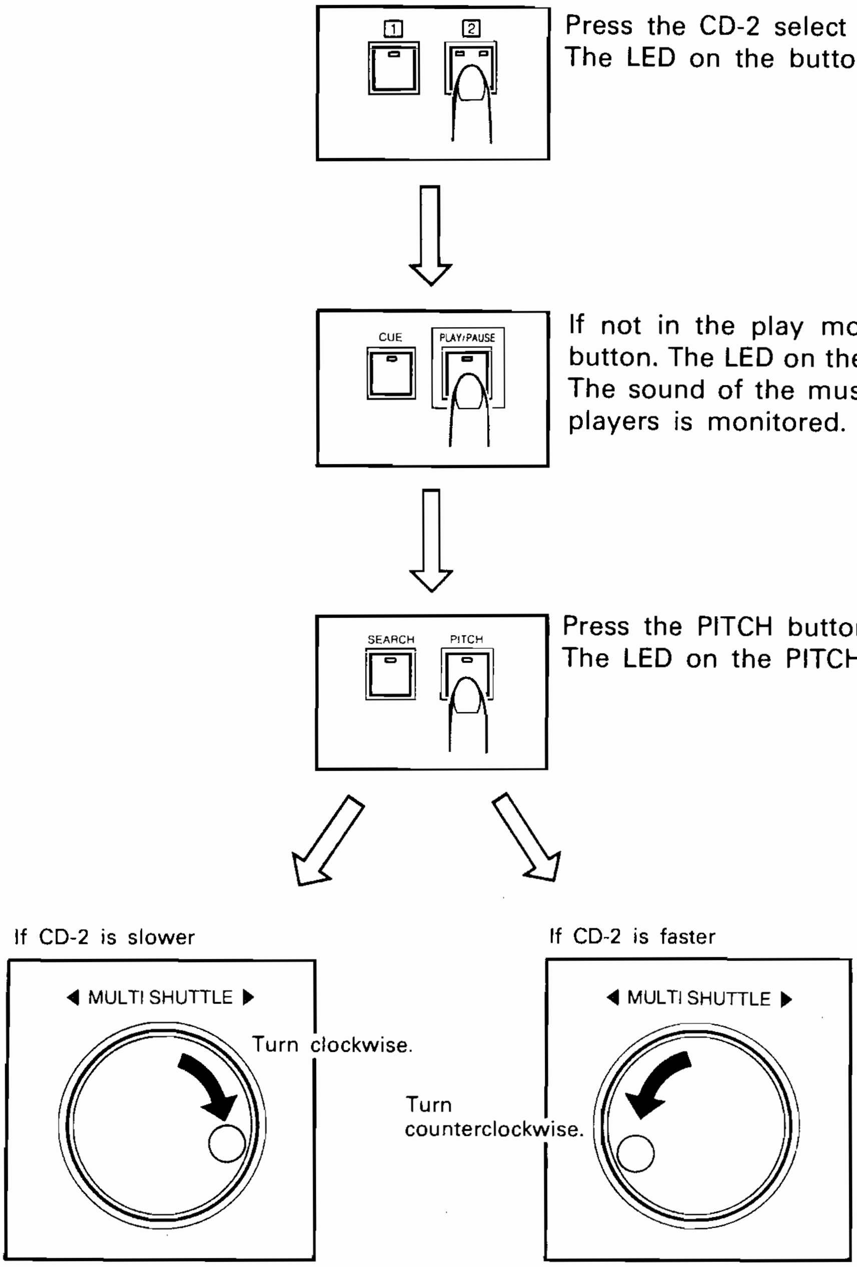
The pause mode is set.
The LED on the PLAY/PAUSE button flashes.

The back cue operation is performed.
The LED on the CUE button first flashes, then stops flashing, remaining lit, once the back cue operation is completed.

Figure 23

6) Matching the pitch

The DN-4000F lets you match the pitch of the music on CD-1 and CD-2 while monitoring both by ear. Turn the MULTI SHUTTLE control clockwise if the pitch of the music on the selected CD player is slower than the pitch of the music on the other player, or turn it counterclockwise if it is faster. The example below explains how to match the pitch of the music being played on CD-1 to the pitch of the music on CD-2. Refer to "Pitch Mode" on page 14.



Press the CD-2 select button (2).
The LED on the button lights.

If not in the play mode, press the PLAY/PAUSE button. The LED on the PLAY/PAUSE button lights. The sound of the music being played on both CD players is monitored.

Press the PITCH button to set the pitch mode.
The LED on the PITCH button lights.

If CD-2 is slower

Turn clockwise.

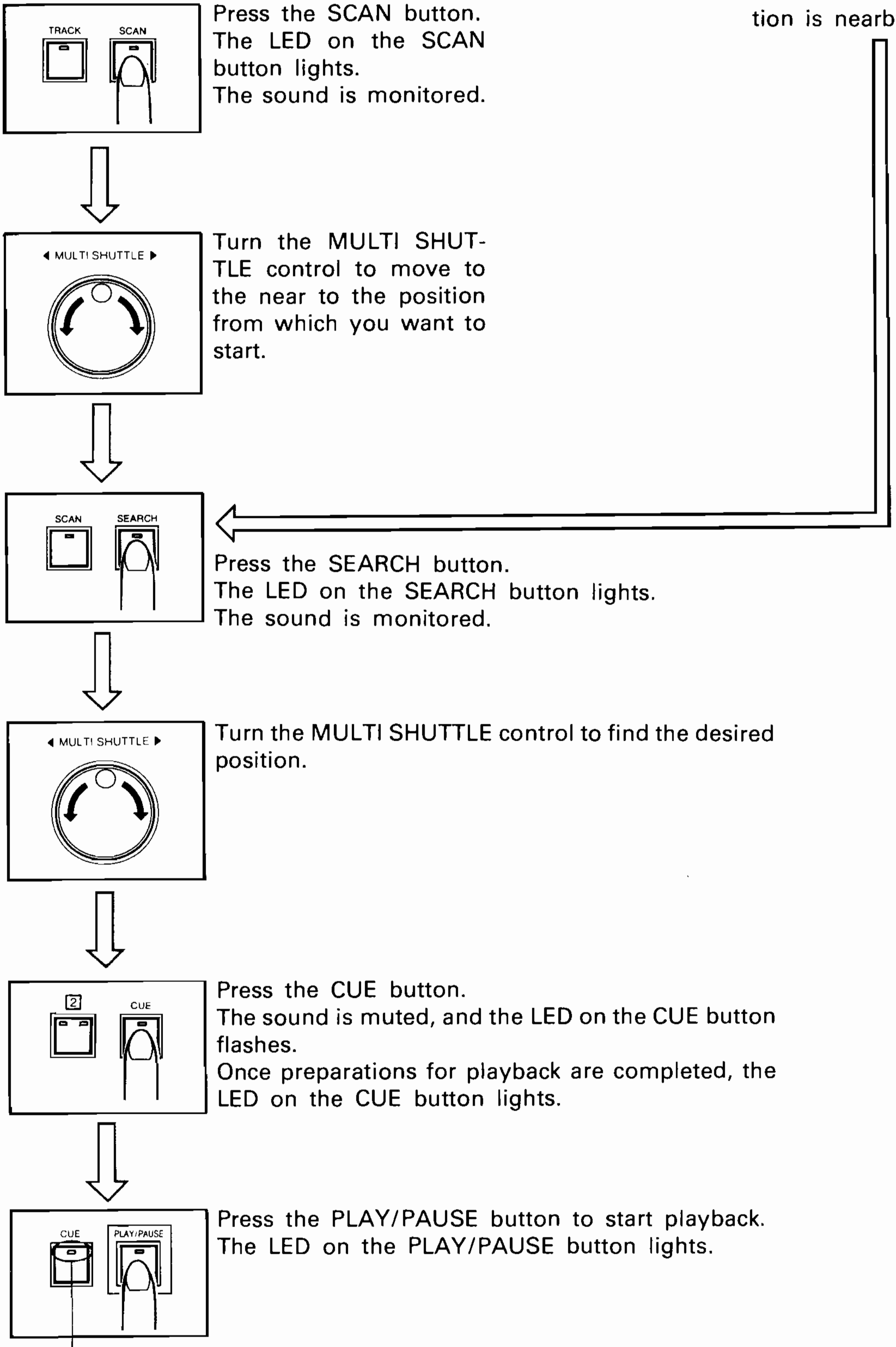
If CD-2 is faster

Turn counterclockwise.

Figure 24

7) Changing the position for starting playback

When a track is selected and the PLAY/PAUSE button is pressed, playback starts from the beginning of the track. To start from any other position, use one of the procedures below. Refer to "Scan Mode" on page 13, "Search Mode" on page 14.



When the desired position is far away

Press the SCAN button.
The LED on the SCAN button lights.
The sound is monitored.

Turn the MULTI SHUTTLE control to move to the near to the position from which you want to start.

When the desired position is nearby

Press the SEARCH button.
The LED on the SEARCH button lights.
The sound is monitored.

Turn the MULTI SHUTTLE control to find the desired position.

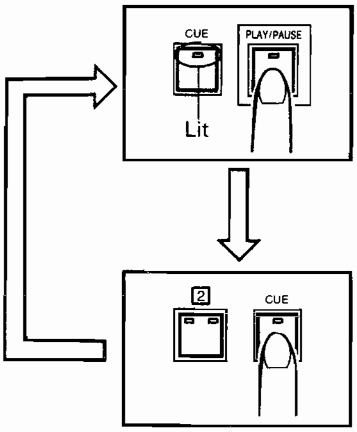
Press the CUE button.
The sound is muted, and the LED on the CUE button flashes.
Once preparations for playback are completed, the LED on the CUE button lights.

Press the PLAY/PAUSE button to start playback.
The LED on the PLAY/PAUSE button lights.

Figure 25

8) Checking the position for starting playback

Use the following procedure to recheck the position from which playback is starting after selecting a track or changing the position by scanning or searching.



Press the PLAY/PAUSE button.
Check that playback starts from the desired position.

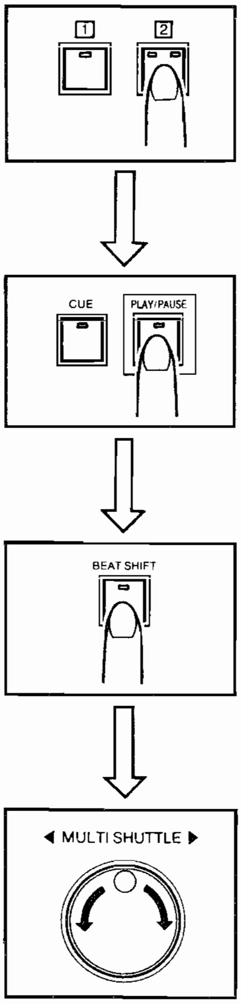
NOTE: The position from which playback will start after pressing the CUE button changes if the PLAY/PAUSE, SCAN or SEARCH button is pressed during playback. Do not press these buttons.

After checking, press the CUE button. The optical pick-up moves back to the position from which playback started and preparations are made for playback. If you want to change the position, use the search function.

Figure 26

9) Matching the beat

Here we explain how to use the beat shift function to match the beat of the sound on CD-1 and CD-2. To simplify the explanation, assume that the same track is being played on both players. In this example, the beat timing of the music on CD-2 is matched to the beat timing of the music on CD-1. Refer to "Beat Shift" on page 16.



Press the CD-2 select button ($\boxed{2}$).
CD-2 is selected and the LED on the CD-2 select button lights.

If CD-2 is not in the play mode, press the PLAY/PAUSE button. Playback starts, and the LED on the PLAY/PAUSE button lights.
The sound of both CD-1 and CD-2 is monitored.

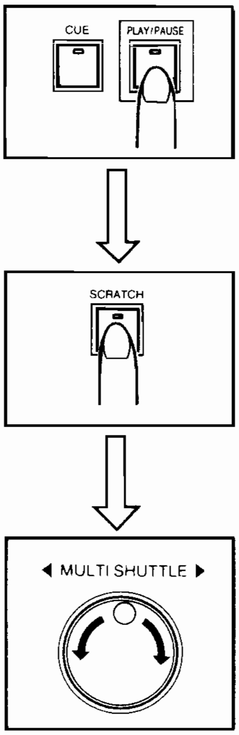
Press the BEAT SHIFT button.
The beat shift mode is set, and the LED on the BEAT SHIFT button lights.
Playback continues.

Turn the MULTI SHUTTLE control to shift the beat timing of CD-2 until it matches CD-1.

Figure 27

10) Using the scratch function

The scratch sound is a digital effect created by the DN-4000F. Scratch sound is produced by setting the scratch mode during playback and turning the MULTI SHUTTLE control. Figure 28 explains the procedure.



Press the PLAY/PAUSE button.
Playback starts, and the LED on the PLAY/PAUSE button lights.

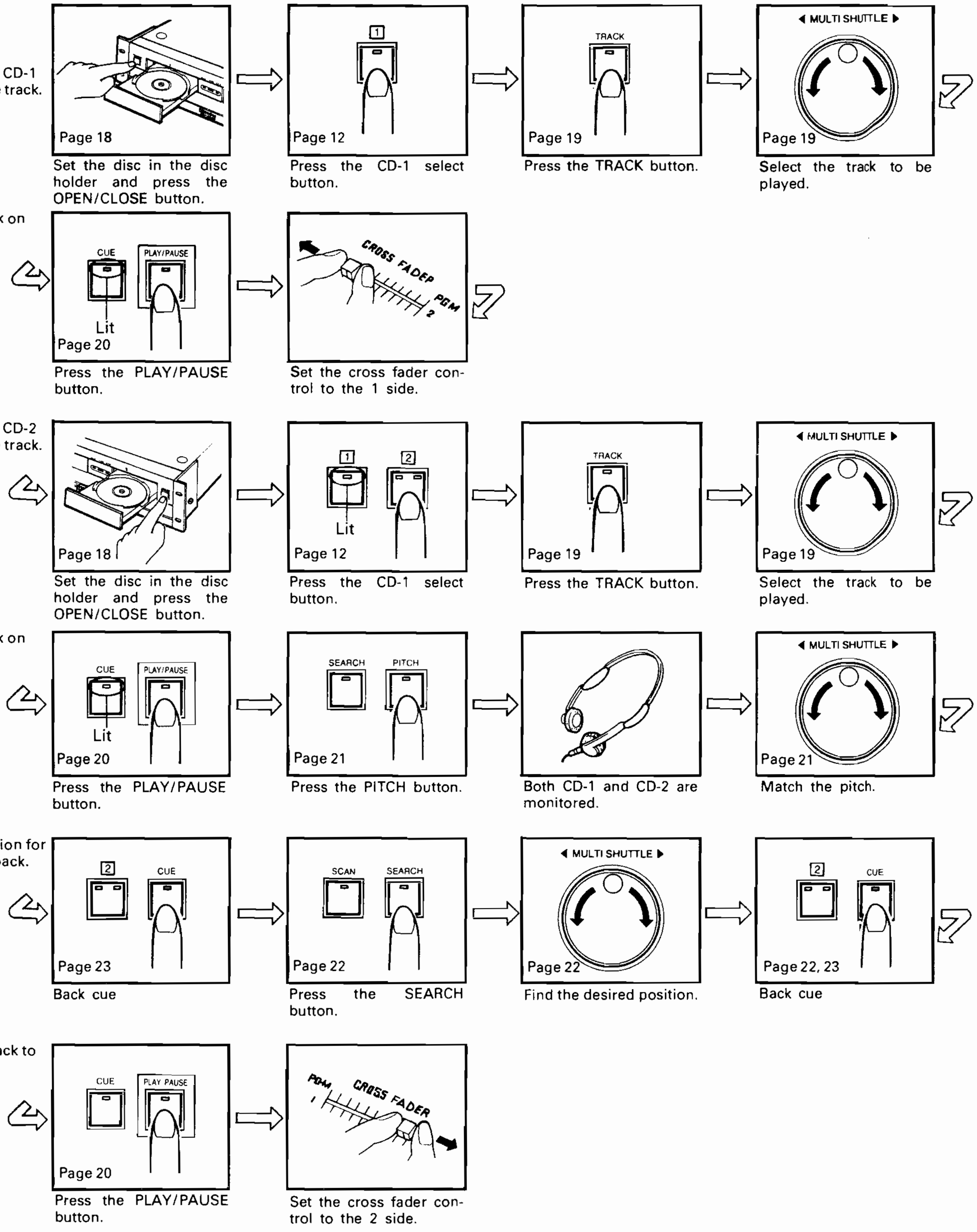
Press the SCRATCH button.
The scratch mode is set, and the LED on the SCRATCH button lights.

Turn the MULTI SHUTTLE control to create the scratch effect according to the speed at which the control is turned. The faster the MULTI SHUTTLE control is turned, the higher the sound.

Figure 28

5 EXAMPLES OF MIXING USING THE DN-4000F

Here we describe actual examples of mixing using the system shown in Figure 5 on page 8.
In these examples, playback is switched from CD-1 to CD-2 with instant start once a certain track has been played on CD-1 and the pitch and beat have been matched to CD-2.


Page 18
1
Page 12
TRACK
Page 19
◀ MULTI SHUTTLE ▶
Page 19
CUE
PLAY/PAUSE
Lit
Page 20
CROSS FADER
PGM
2
Page 18
1
2
Lit
Page 12
TRACK
Page 19
◀ MULTI SHUTTLE ▶
Page 19
CUE
PLAY/PAUSE
Lit
Page 20
SEARCH
PITCH
Page 21
◀ MULTI SHUTTLE ▶
Page 21
2
CUE
Page 23
SCAN
SEARCH
Page 22
◀ MULTI SHUTTLE ▶
Page 22
2
CUE
Page 22, 23
CUE
PLAY PAUSE
Page 20
PGM
1
CROSS FADER

Load a disc in CD-1 and select the track.

Set the disc in the disc holder and press the OPEN/CLOSE button.

Press the CD-1 select button.

Press the TRACK button.

Select the track to be played.

Start playback on CD-1.

Press the PLAY/PAUSE button.

Set the cross fader control to the 1 side.

Load a disc in CD-2 and select the track.

Set the disc in the disc holder and press the OPEN/CLOSE button.

Press the CD-1 select button.

Press the TRACK button.

Select the track to be played.

Start playback on CD-2.

Press the PLAY/PAUSE button.

Press the PITCH button.

Both CD-1 and CD-2 are monitored.

Match the pitch.

Find the position for starting playback.

Back cue

Press the SEARCH button.

Find the desired position.

Back cue

Switch playback to CD-2.

Press the PLAY/PAUSE button.

Set the cross fader control to the 2 side.

Figure 29

6 SPECIFICATIONS

GENERAL

Type:	Twin Mechanism Compact Disc Player with Wired Remote Controller
Available Disc:	Standard Compact Disc (12 cm, 8 cm)

AUDIO

Quantization:	18 bit linear
Sampling Frequency:	44.1 kHz at normal speed
Oversampling Rate:	8 Times
Frequency Response:	20 to 20,000 Hz
Distortion:	THD 0.008% below
Signal to Noise Ratio:	92 dB or more
Dynamic Range:	90 dB or more
Channel Separation:	85 dB or more
Load Impedance:	47 k ohms or more
Output Level:	2.0 V at 0 dB Disc (47 k ohm)

FUNCTIONS

Music Select:	1 to 99 Selectable Increment: Clockwise Decrement: Counterclockwise
Variable Speed:	±10% Fast: Clockwise Slow: Counterclockwise
Beat Shift:	Max. 1.48 sec Forward: Clockwise Reverse: Counterclockwise
Scratch Play:	Range: ±0.5 sec
Dimensions:	Player Unit; 434 (W) × 132 (H) × 340 (D) mm Controller; 230 (W) × 55 (H) × 180 (D) mm
Weight:	Player Unit; Approximate 5 kg Controller; Approximate 2 kg
Power Consumption:	35 W
Power Requirement:	U.S.A. Model; AC 120 V 60 Hz Multiple Voltage Model; AC 120 V, 220 V or 240 V 50/60 Hz
Environment:	Temperature; 5 to 35°C Humidity; 25 to 85% RH (Non Condensing) Storage Temperature; –20 to 60°C
Safety Standard:	UL Approval

ACCESSORIES

Connecting Cable:	3 m (10 feet)
Line out Cord (L/R):	2 pcs.
Rack Mount Angle:	2 pcs. with screws

* Design and specifications are subject to change without notice in the course of product improvement.

7 THE COMPACT DISC

1. Precautions on handling compact discs

- Do not allow fingerprints, oil or dust to get on the surface of the disc.
  If the disc is dirty, wipe it off with a soft dry cloth.
  We recommend using DENON's AMC-20/21 CD CLEANER is recommended.
- Do not use benzene, thinner, water, record spray, electrostatic-proof chemicals, or silicone-treated cloths to clean discs.
- Always use carefully handle discs to prevent damaging the surface; in particular when removing a disc from its case or returning it.
- Do not bend.
- Do not apply heat.
- Do not enlarge the hole in the center of the disc.
- Do not write on the label (printed side) with a hard-tipped implement such as a pencil or ball point pen.
- Condensation will form if a disc is brought into a warm area from a colder one, such as outdoors in winter. Do not attempt to dry the disc with a hair dryer, etc.

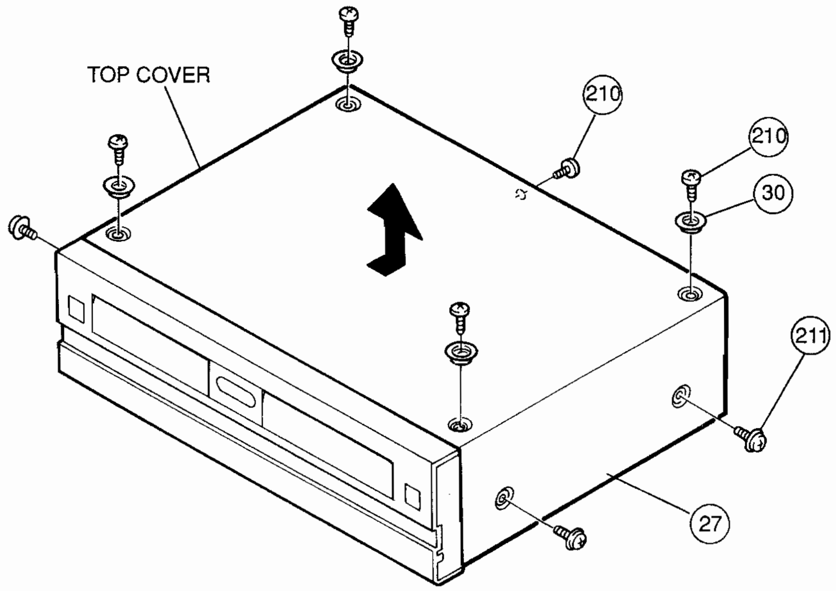
2. Precaution on storage

- After playing a disc, always unload it from the player.
- Always store the disc in the cartridge to prevent from dirt or damage.
- Do not place discs in the following areas:
  1) Areas exposed to direct sunlight for a considerable time.
  2) Areas subject to accumulation of dust or high humidity.
  3) Areas affected by heat from indoor heaters, etc.

DISASSEMBLY

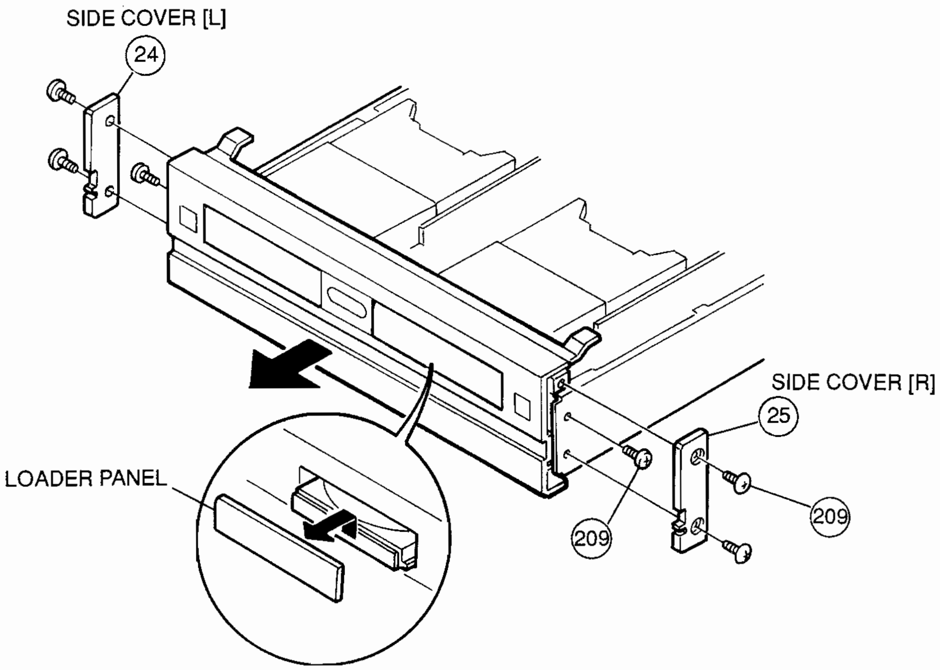
● TOP COVER

1. Remove 4 screws (211) on both sides, 1 screw (210) on the rear side, and 4 screws (210) with top cover washer ㉚ on the top.
2. Detach the top cover.


TOP COVER
(210)
(210)
㉚
(211)
㉗

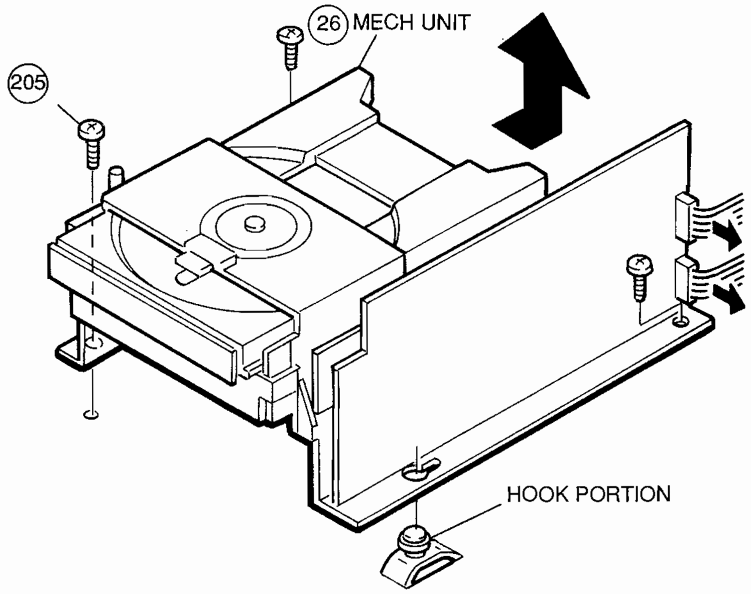
● FRONT PANEL

1. While drawing out the loader this side, pull the loader panel frontward and pull it upward to detach it.
2. Detach the side cover㉔, ㉕by removing 4 screws(209).
3. Remove 2 screws(209)on both sides and disassemble front panel.


SIDE COVER [L]
㉔
SIDE COVER [R]
㉕
(209)
(209)
LOADER PANEL

● MECHANISM UNIT

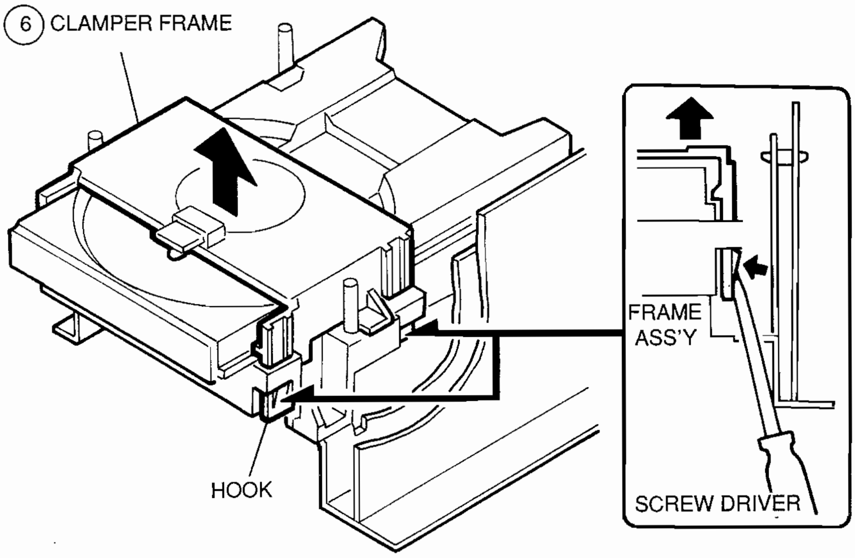
1. Remove 3 screws ⑳⑤.
2. Slide the mechanism backward and disengage the mechanism from the hook portion.



(26) MECH UNIT
(205)
HOOK PORTION

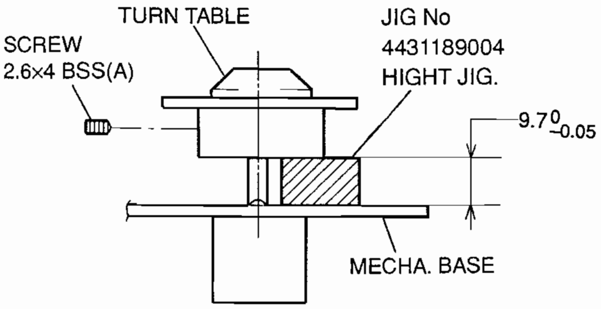
● CLAMPER FRAME

1. Remove the hooks. (4 places on both sides.)
2. Detach the clamper frame ⑥



⑥ CLAMPER FRAME
HOOK
FRAME ASS'Y
SCREW DRIVER

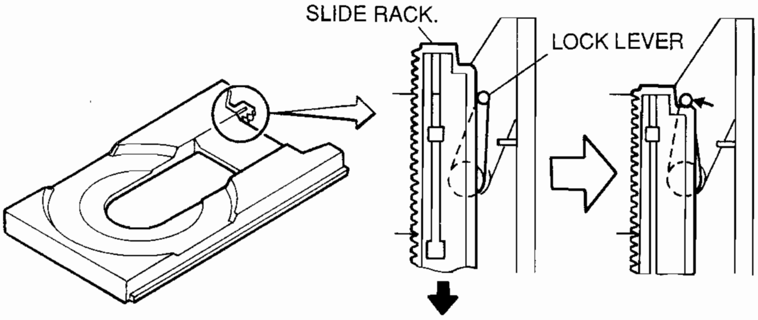
TURNTABLE HEIGHT ADJUSTMENT


TURN TABLE
SCREW
2.6x4 BSS(A)
JIG No
4431189004
HIGHT JIG.
$9.7^{0}_{-0.05}$
MECHA. BASE

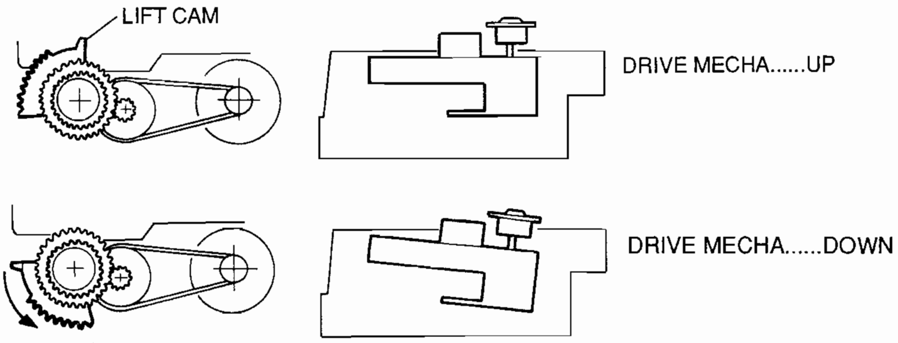
1. Fit the turntable to the shaft, and insert the 9.7mm spacer (jig) between the turntable and mechanism base.
2. While lightly pressing the turntable top, tighten the screw (2.6 × 4 BSS) with a hex wrench.

LOADER FRAME ASSEMBLING

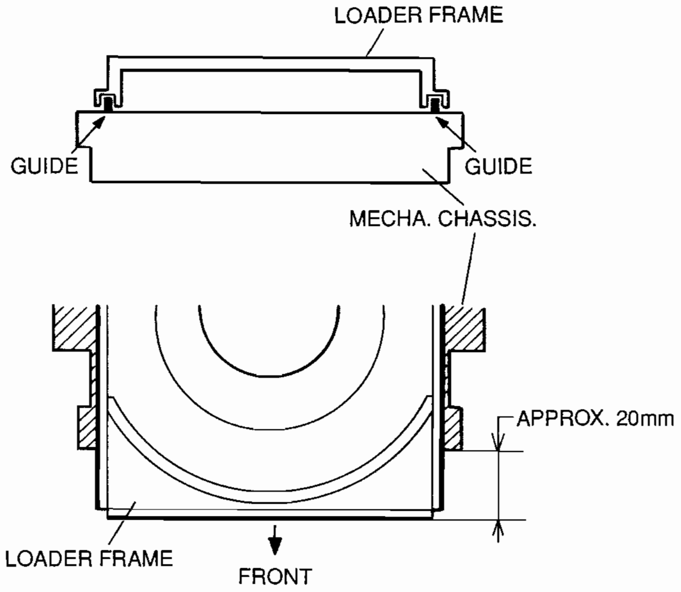
1. Slide the slide rack located inner side of the loader frame and set the lock lever as shown in the below figure.


SLIDE RACK.
LOCK LEVER

2. Rotate the gear portion of lift cam counterclockwise by finger until it comes stopper part. At this time, confirm the drive mechanism that is placed in lowered position.

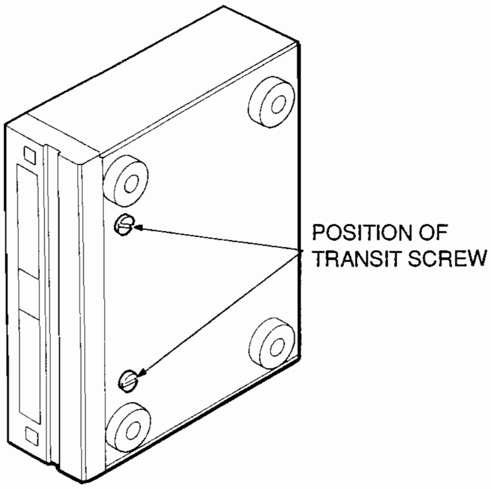

LIFT CAM
DRIVE MECHA......UP
DRIVE MECHA......DOWN

3. Fit the guide of mechanism chassis and the ditch of loader frame and put the loader frame on the mechanism chassis. At this time, make sure that the front surface of the loader frame is set at 20mm extruded position from the front surface of mechanism chassis.


LOADER FRAME
GUIDE
GUIDE
MECHA. CHASSIS.
APPROX. 20mm
LOADER FRAME
FRONT

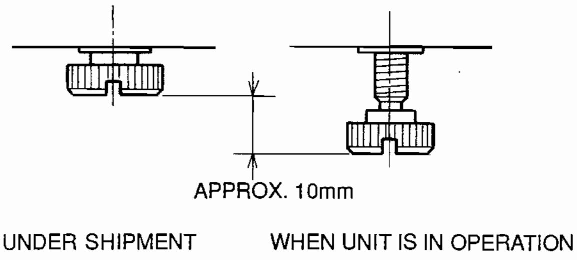
4. Insert the clamper frame to the mechanism chassis until it locks.

SHIPPING LOCK


POSITION OF
TRANSIT SCREW

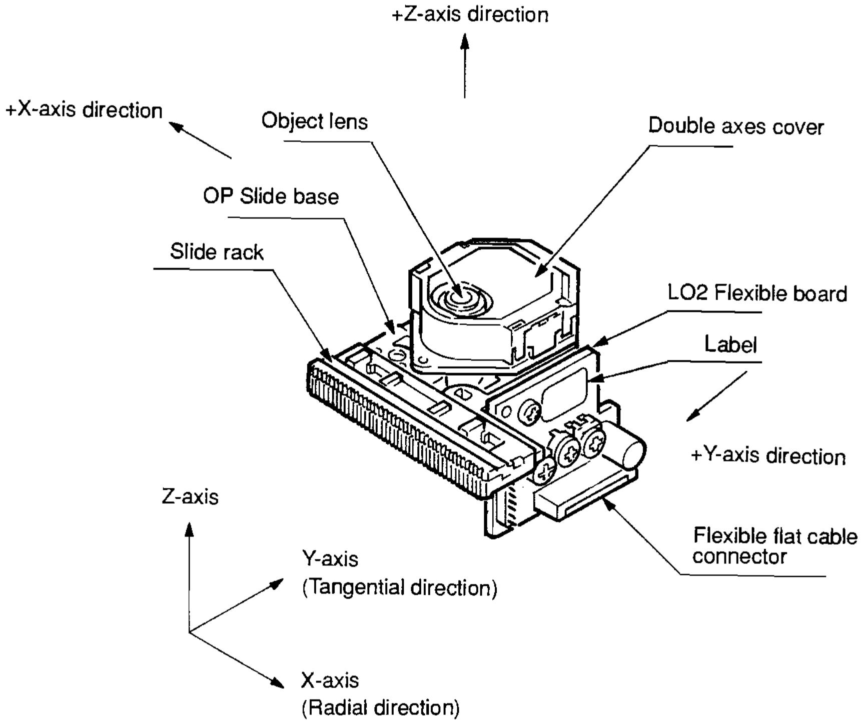
1. When Operating the Unit
   Before applying the power to the unit, be sure to loosen 2 transit screws on the bottom of the unit with a coin or finger until they stop. (Approx. 10 turns, 10mm of length.)

2. When Re-shipping the Unit
   (1) Apply the power to the unit and open the disc holder to make sure of disc that is not engaged. Then, close the disc holder.
   (2) Turn off the power, and secure 2 transit screws on the bottom of the unit with a coin or finger until they stop.

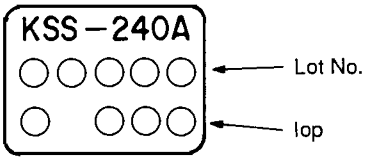

APPROX. 10mm
UNDER SHIPMENT
WHEN UNIT IS IN OPERATION

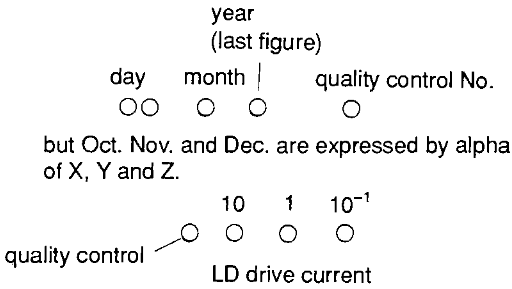
NOTE FOR HANDLING OF LASER PICK-UP

DESCRIPTION OF THE COMPONENTS


+Z-axis direction
+X-axis direction
Object lens
Double axes cover
OP Slide base
Slide rack
LO2 Flexible board
Label
+Y-axis direction
Z-axis
Flexible flat cable connector
Y-axis
(Tangential direction)
X-axis
(Radial direction)

Label

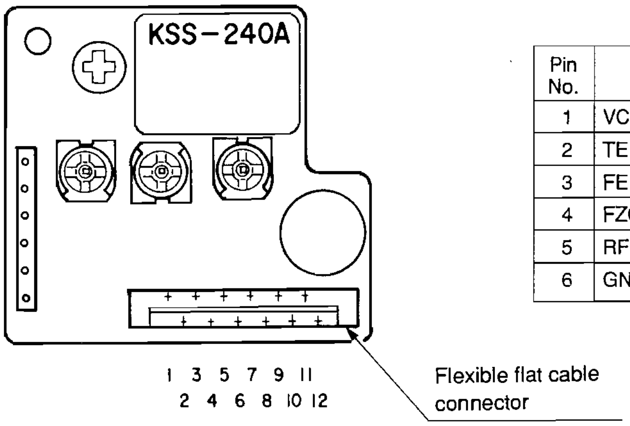

KSS-240A
Lot No.
Iop


year
(last figure)
day
month
quality control No.
10
1
10^{-1}
quality control
LD drive current

but Oct. Nov. and Dec. are expressed by alphabetical letters of X, Y and Z.

The expressed unit is by mA, with omission of the decimal point as for example, 56.5mA will be expressed as 565, but the head of English letter means the control in the manufacturing plant.

PIN CONNECTOR

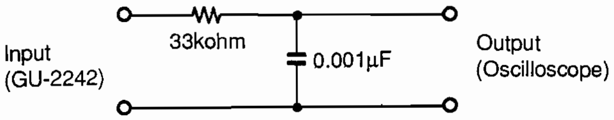

KSS-240A
1 3 5 7 9 11
2 4 6 8 10 12
Flexible flat cable connector

Pin No.	Description	Input/ Output	Pin. No.	Description	Input/ Output
1	VC (+2.5v)	OUT	7	Vcc (+5V)	IN
2	TE (TRK ER signal)	OUT	8	LDC (LD Control)	IN
3	FE (FCS ER signal)	OUT	9	FCS + (Double axes)	IN
4	FZC (FZC signal)	OUT	10	TRK + (Double axes)	IN
5	RF (RF signal)	OUT	11	TRK – (Double axes)	IN
6	GND	IN	12	FCS – (Double aces)	IN

ADJUSTMENT

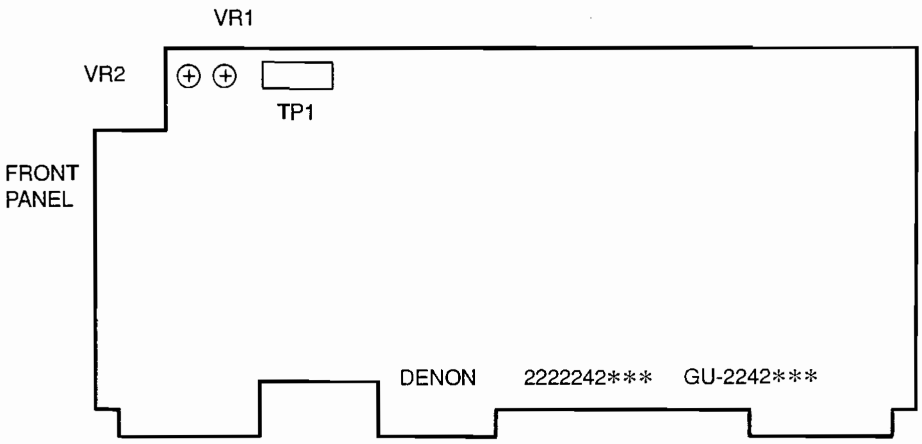
NECESSARY EQUIPMENTS FOR ADJUSTMENT

1. Dual trace oscilloscope
2. Reference disc (33CA-1252: Loudness Never Stay Here, Never Forget You)
3. Oscillator (10Hz ~ 10kHz, 0 ~ 3 Vp-p)
4. Frequency Counter
5. Filter for measurement


Input
(GU-2242)
33kohm
0.001μF
Output
(Oscilloscope)

(Filter for measurement)

LOCATION


VR1
VR2
TP1
FRONT
PANEL
DENON
2222242***
GU-2242***

PRESET

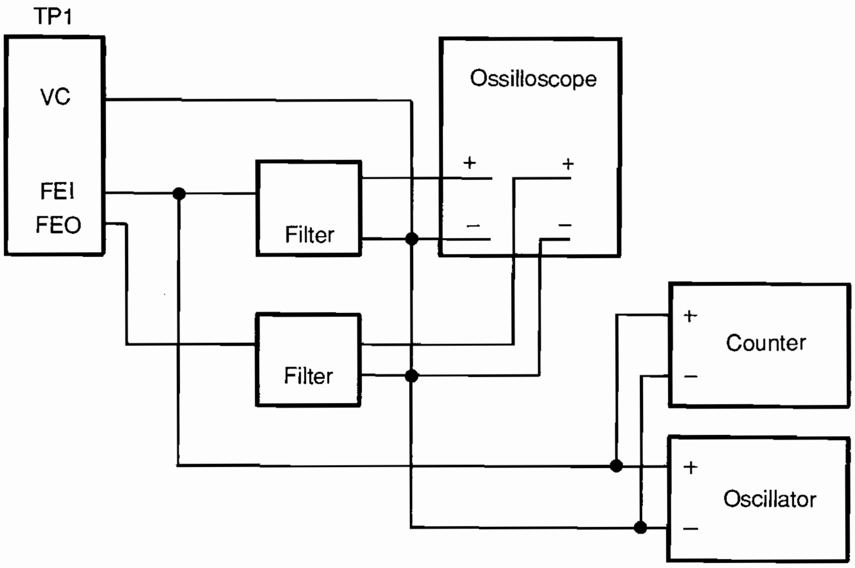
VR1 (Focus gain)	Center
VR2 (Tracking gain)	Center

STEP

1. Focus gain
2. Tracking gain

FOCUS GAIN ADJUSTMENT

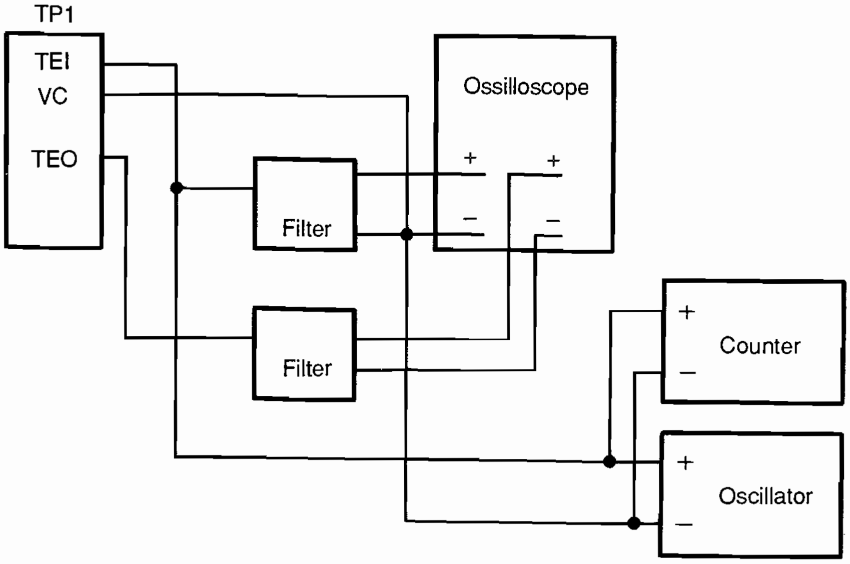
1. Connection


TP1
VC
FEI
FEO
Filter
Filter
Ossilloscope
+
+
–
–
+
Counter
–
+
Oscillator
–

2. Playback track 01 with normal play operation.
3. Set oscillator 1.0kHz/0.6Vp-p.
4. Switch oscilloscope to X-Y mode.
5. Adjust VR1 (FOCUS) to symmetrize Lissajous to X and Y axes.

TRACKING GAIN ADJUSTMENT

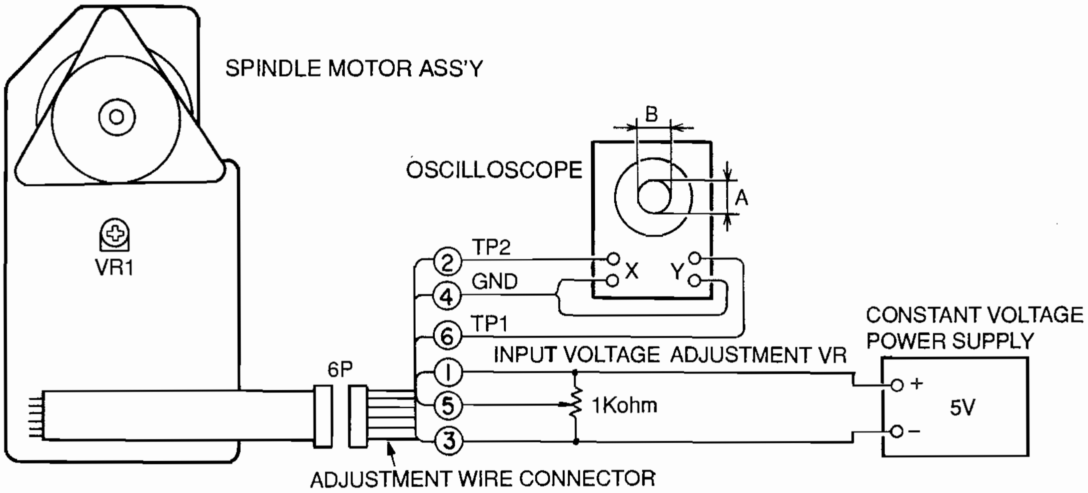
1. Connection


TP1
TEI
VC
TEO
Filter
Filter
Ossilloscope
+
+
–
–
+
Counter
–
+
Oscillator
–

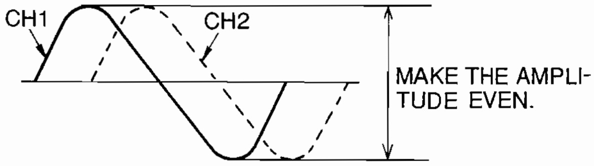
2. Playback track No. 01 with normal play operation.
3. Set oscillator 1.9kHz/0.6Vp-p.
4. Switch oscilloscope to X-Y mode.
5. Adjust VR2 (TRACK) to symmetrize Lissajous to X and Y axes.

● SPINDLE MOTOR ADJUSTMENT

(1) Disassemble the mechanism unit, then take out the spindle motor ass'y.
(2) Connect the adjustment wire connector (6P) to the measuring equipment as per the figure shows.


SPINDLE MOTOR ASS'Y
B
OSCILLOSCOPE
A
VR1
TP2
GND
TP1
X
Y
②
④
⑥
①
⑤
③
6P
INPUT VOLTAGE ADJUSTMENT VR
1Kohm
CONSTANT VOLTAGE POWER SUPPLY
+
5V
–
ADJUSTMENT WIRE CONNECTOR

(3) Vary the balance volume VR1 and adjust the amplitude of vertical (A) and horizontal (B) becomes almost even. (Adjust the VR shifts the amplitude of (B).)
(4) In case using a dual-mode oscilloscope for the adjustment, set it to ALTER or CHOPPER and apply a signal to CH1 and CH2, then rotate the balance volume VR1 so as to obtain the both waveforms become even as shown in the figure.


CH1
CH2
MAKE THE AMPLITUDE EVEN.

Note: Please be reminded that the too great applying input signal causing saturation of waveform.

PART LIST OF EXPLODED VIEW

- Part indicated with the mark " ⦿ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⦿ 1	GU-2244	POWER PWB UNIT	U.S.A. model only	1
1-1		POWER PWB UNIT		
1-2		COMMUNICATION PWB UNIT		
1-3		PANEL PWB UNIT A		
1-4		PANEL PWB UNIT B		
1-5		PANEL PWB UNIT C		
1-6		REG.PWB UNIT A		
1-7		REG.PWB UNIT B		
⦿ 1	GU-2340	POWER PWB UNIT	ASIA model only	1
1-1		POWER PWB UNIT		
1-2		COMMUNICATION PWB UNIT		
1-3		PANEL PWB UNIT A		
1-4		PANEL PWB UNIT B		
1-5		PANEL PWB UNIT C		
1-6		REG.PWB UNIT A		
1-7		REG. PWB UNIT B		
2	104 0194 014	FOOT ASS'Y		4
⦿ 3	105 1005 008	BOTTOM COVER ASS'Y		1
⦿ 4	446 0044 107	SIDE FRAME		2
⦿ 5	105 0959 207	BACK PANEL	U.S.A model only	1
⦿ 5	105 0959 317	BACK PANEL	ASIA model only	1
⚠ 6	212 4695 001	POWER SWITCH		1
⚠ 7	445 0056 008	CORD BUSH		1
⚠ 8	206 2086 002	AC CORD w/CON	U.S.A. model only	1
⚠ 8	206 2088 000	AC CORD w/CON	ASIA model only	1
9	342 0013 001	FERRITE CORE		1
⦿ 10	449 0033 065	LOCKING CARD SPACER		2
11	443 1137 001	COLLAR		2
⦿ 12	412 3338 008	TRANS BRACKET		1
⦿ 13	461 0670 004	CUSHION		1
⚠ 17	233 5891 005	POWER TRANS	U.S.A. model only	1
⚠ 17	233 5892 004	POWER TRANS	ASIA model only	1
18	WA-0120 H	WASHER		2
19	144 2119 309	FRONT PANEL		1
20	146 1257 307	INNER PANEL		1
21	446 0045 106	FRONT SUB PANEL		1
22	469 0040 007	UNIVERSAL BUSH		1
23	443 1164 003	BOTTOM GUIDE		1
24	146 1258 209	SIDE COVER (L)		1
25	146 1267 203	SIDE COVER (R)		1
⦿ 26	FG 940A	CD MECHA UNIT		2
⦿ 27	102 0340 008	TOP COVER (A)		1
28	461 0673 001	SHEET		1
29	461 0674 000	SHEET		1
30	146 0772 003	TOP COVER WASHER		4
31	146 9238 111	LOADER PANEL		2
⚠ 32	206 1039 050	FUSE 1.6A	U.S.A. model only	1
⚠ 32	206 1015 029	FUSE 1A	ASIA model only	1
⚠ 33	212 3315 023	VOLTAGE SELECTOR	ASIA model only	1
⦿ 34	412 2183 018	V. SELECTOR BRACKET	ASIA model only	1
35	461 0672 002	CUSHION		1
⦿ 36	417 0442 002	RADIATOR		1
37	393 9486 006	LED	SLB-26VR	2
38	393 9488 004	LED	SPB-26	2
39	205 0680 083	8P MD CONNECTOR		1
40	204 8265 009	4P RCA PINJACK(EMI)		1

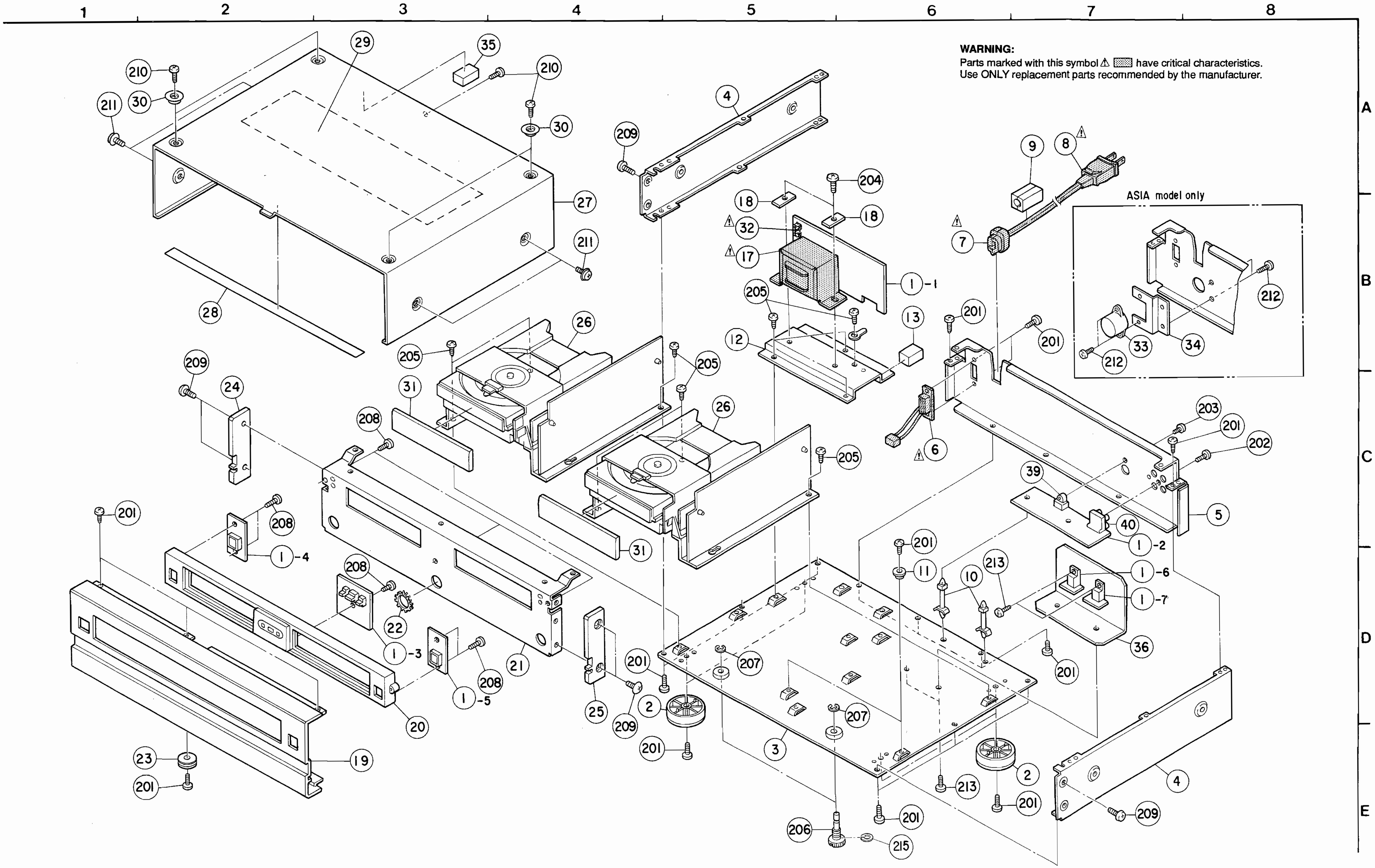
SCREWS AND NUTS

Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	473 7015 018	TAPPING SCREW 3×8 (S)	Black	23
202	473 7500 044	TAPPING SCREW 3×8 (P)	Black	1
203	471 3813 014	SCREW 2.6×8	Black	1
204	473 7007 000	TAPPING SCREW 4×8 (S)	Black	2
205	473 7002 034	TAPPING SCREW 3×6 (S)	Black	10
206	443 1163 004	LOCK SCREW		2
207	476 1005 007	5E RING		2
208	473 3500 015	TAPPING SCREW 3×8 (P)		8
209	473 7007 013	TAPPING SCREW 4×10 (S)	Black	6
210	473 7002 021	SCREW 3×8	Black	5
211	477 0263 005	3P SPRING SCREW	Black	4
212	471 3203 019	SCREW 2.6×6	ASIA model only	2
213	471 3305 014	SCREW 3×10	Black	4
214	473 7002 021	SCREW 3×8	Black ASIA model only	2
215	462 0116 008	CUT WASHER		2

PACKING AND ACCESSORIES (not included EXPLODED VIEW)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
301	503 0698 102	CUSHION (L)		1
302	503 0699 101	CUSHION (R)		1
303	505 0038 030	POLY COVER		1
304	505 0131 076	CABINET COVER		1
305	505 0102 089	STYRENE PAPER		1
306	504 0092 060	STYRENE PAPER		1
307	RC-33	REMOTE CONTROL UNIT		1
308	505 0061 010	ENVELOPE		1
309	511 2168 003	INST. MANUAL		1
310	505 8006 019	ENVELOPE		1
311	204 8121 004	2P PIN CORD		2
312	204 2485 005	8P MD CON. CORD		1
313	144 2120 204	RACK ANGLE		2
314	502 0777 004	CUSHION ASS'Y		1
315	503 0976 002	CUSHION		2
316	473 7004 087	TAPPING SCREW 4×14 (S)	Black	6
317	501 1527 108	CARTON CASE		1
318	513 1349 004	TERMINAL CARBON FILM		1

EXPLODED VIEW OF CHASSIS AND CABINET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ASIA model only
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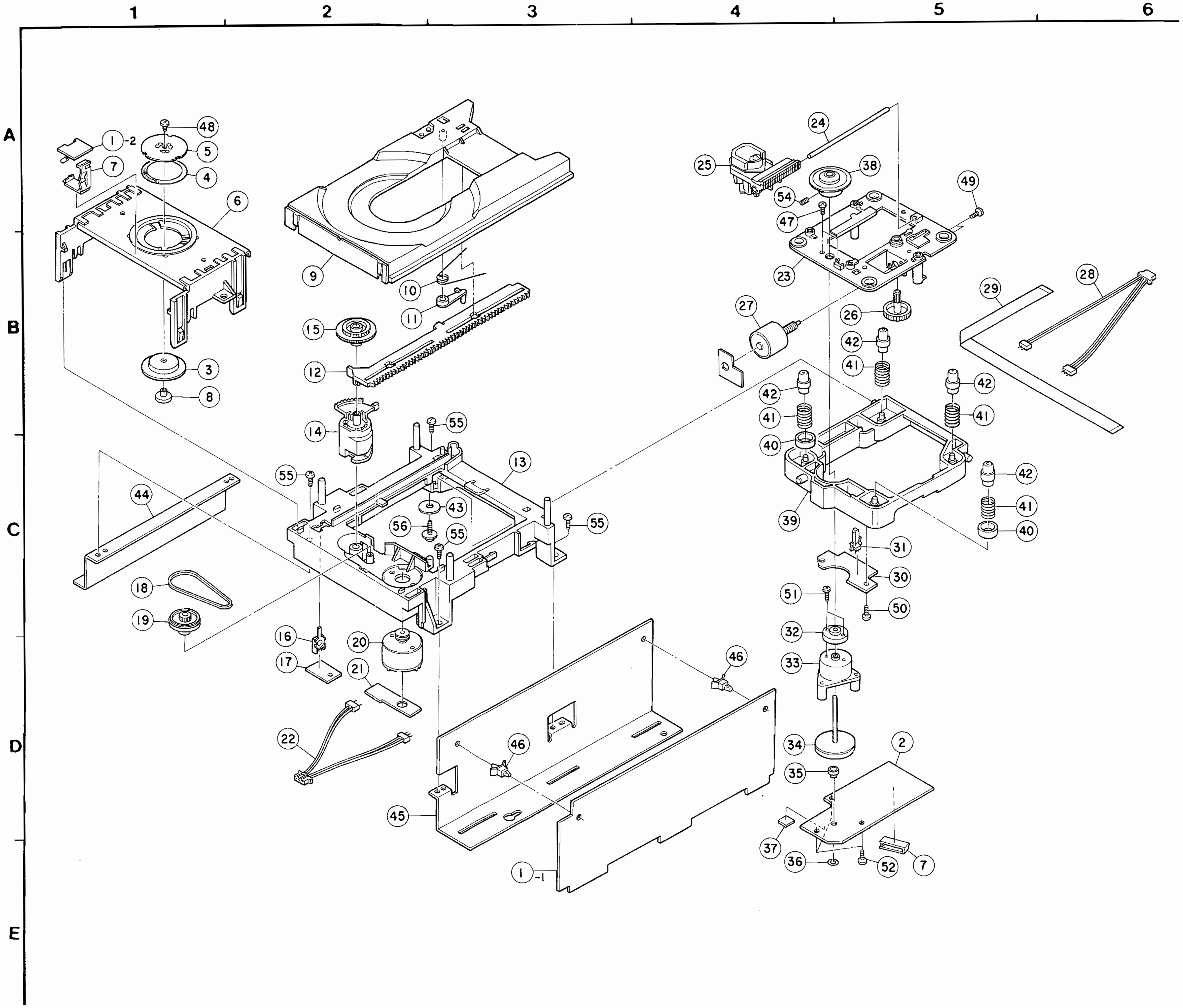
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST FG-940A MECHA UNIT

- Part indicated with the mark " ⊙ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⊙ 1	GU-2242	MECHA PWB UNIT		1
1-2		LED PWB UNIT		
⊙ 2	2U- 1644	MOTOR DRIVE UNIT		1
3	421 0604 001	CLAMPER		
4	504 0147 009	CLAMPER SHEET		1
5	421 0573 006	CLAMP YOKE		1
6	413 3133 106	CLAMPER FRAME		1
7	449 0059 007	CABLE CLAMPER		1
8	421 0605 107	CLAMPER HOLDER		1
9	431 0300 302	LOADER FRAME		1
10	463 0669 008	LOCK LEVER SPRING		1
11	412 3215 202	LOCK LEVER		1
12	435 0117 403	SLIDE RACK		1
13	411 1019 300	MECH CHASSIS		1
14	424 0160 104	LIFT CAM		1
15	424 0162 005	GEAR		1
16	212 1059 006	OP/CL SW.		1
17	222 2275 006	MOTOR SW. PWB		1
18	423 0056 011	BELT		1
19	424 0161 103	PULLEY GEAR		1
20	GEN 1492	L. MOTOR SUB ASS'Y		1
21	222 2275 006	MOTOR SW. PWB		1
22	203 8318 005	5-2, 2P PH-SAN CORD-R		1
23	411 1017 205	MECH BASE		1
24	443 1094 005	P.U. SHAFT		1
25	499 0191 009	LASER PU (KSS-240A)		1
26	424 0164 003	HELICAL GEAR		1
27	GEN 1397	SLIDE MOTOR SUB ASS'Y		1
28	203 8319 004	5-3, 2P PH-SAN CORD-W		1
29	009 0051 001	12P FFC		1
30	222 2312 008	INNER SW. PWB		1
31	212 6013 005	INNER SW. (PU)		1
32	443 1126 203	SPINDLE SPACER		1
33	346 0067 318	MOTOR HOUSING ASS'Y		1
34	GEN 1634	ROTOR SUB ASS'Y		1
35	431 0271 004	THRUST METAL		1
36	477 0298 038	CUT WASHER		1
37	461 0675 009	SPACER		1
38	GEN 1635	TURNTABLE SUB ASS'Y		1
39	GEN 1408	MECHA FRAME SUB ASS'Y		1
40	443 1136 002	SPRING SPACER		2
41	463 0583 100	SPRING (F)		4
42	462 0078 104	DAMPER		4
43	462 0113 014	RUBBER WASHER		1
⊙ 44	412 3308 106	MECH BRACKET (L)		1
⊙ 45	412 3309 202	MECH BRACKET (R)		1
⊙ 46	449 0033 010	LOCKING CARD SPACER		2
47	471 3302 013	SCREW 2×5		2
48	471 3301 021	SCREW 3×4	Black	1
49	471 3801 039	SCREW 2×3		2
50	473 7505 036	TAPPING SCREW 2.6×5 (P)		1
51	471 1104 013	SCREW 2×8		2
52	471 3302 017	SCREW 3×5		3
53	—			
54	474 4300 004	SCREW 2.6×4 (A)		1
55	473 7002 021	TAPPING SCREW 3×8 (S)	Black	4
56	477 0262 006	SPECIAL SCREW		1

EXPLODED VIEW OF FG-940A MECHA UNIT

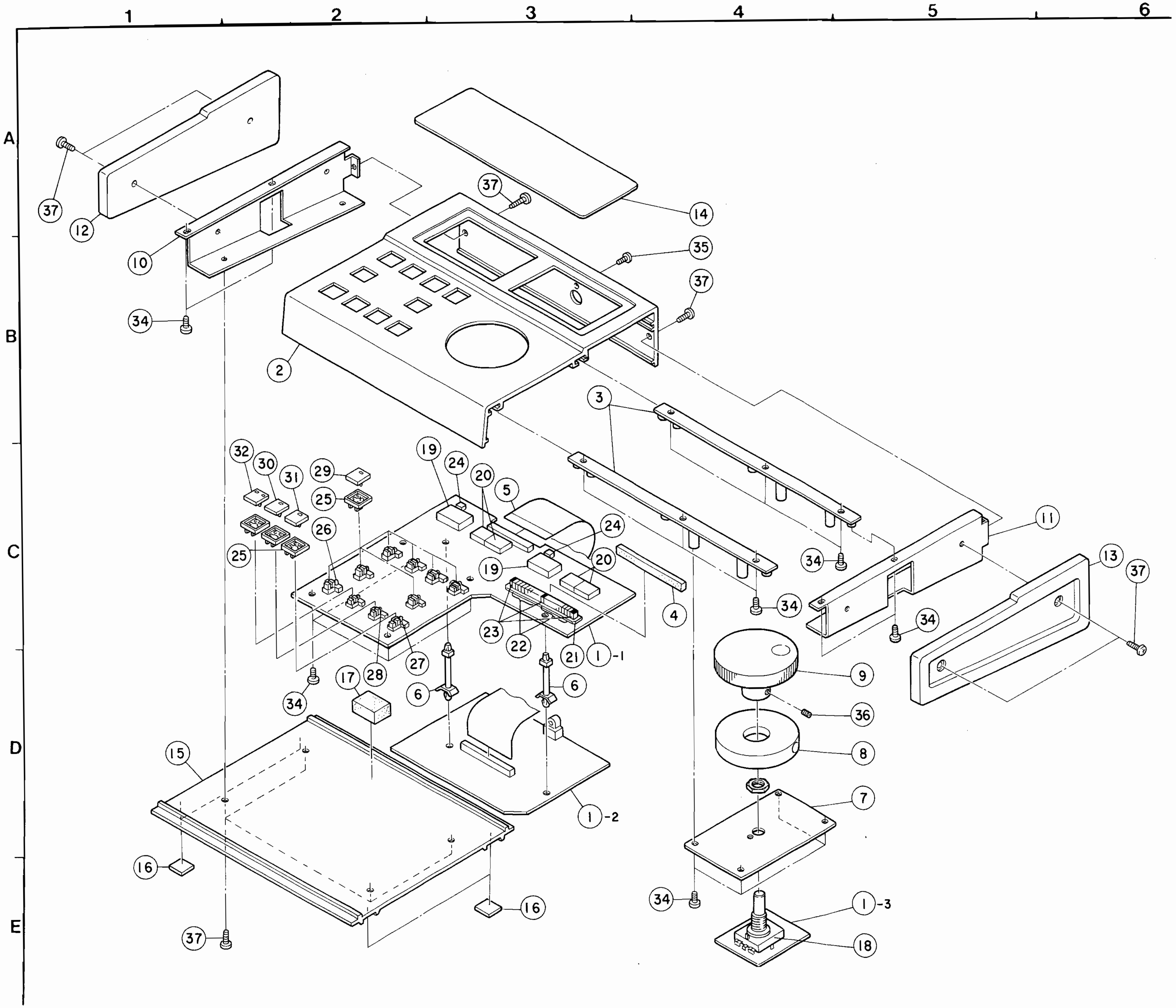


PART LIST OF RC-33 REMOTE CONTROL UNIT

- Part indicated with the mark " ◉ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	GU- 2248	CONTROL PWB UNIT		1
1-1		PANEL PWB UNIT		
1-2		CONTROL PWB UNIT		
1-3		JOG PWB UNIT		
2	144 2118 203	TOP COVER		1
◉ 3	441 1306 108	FIX PLATE ASS'Y		1
◉ 4	461 0680 007	SPACER		1
5	009 0054 008	40P FFC		1
◉ 6	449 0033 052	LOCKING CARD SPACER		2
◉ 7	441 1309 008	JOG PLATE		1
8	443 1160 007	JOG DIAL SPACER		1
9	112 0684 208	JOG DIAL		1
◉ 10	412 3306 108	SIDE BRACKET (L)		1
◉ 11	412 3307 107	SIDE BRACKET (R)		1
12	146 1259 101	SIDE COVER (L)		1
13	146 1260 103	SIDE COVER (R)		1
14	146 1256 104	WINDOW		1
◉ 15	105 0958 004	BOTTOM COVER		1
16	461 0649 006	RUBBER SHEET		4
◉ 17	461 0671 003	CUSHION		1
18	212 0330 001	ROTARY SWITCH (SRGF)		1
19	393 9411 000	LED (7 Segments)	LB602VA2	2
20	393 9485 007	LED (7 Segments)	LB-402VD	4
21	441 1308 009	LED HOLDER		1
22	393 9486 019	LED (ORANGE)	SLB-26DU	14
23	393 9476 016	LED (RED)	SLB-25VR3F	3
24	393 9496 009	LED (GRN)	MU03-5202	2
25	114 0114 017	MOUNTING FRAME (GRY)		10
26	212 4759 002	TACT SW w/LED (GRN)		8
27	212 4759 028	TACT SW w/LED (GRN)		1
28	212 4759 015	TACT SW w/LED (RED)		1
29	113 1448 019	BUTTON TOP (L. GRY)		7
30	113 1448 022	BUTTON TOP (RED)		1
31	113 1448 035	BUTTON TOP (GRN)		1
32	113 1448 048	BUTTON TOP (L. GRY)		1
34	471 3301 018	SCREW 3×4		18
35	471 3813 014	SCREW 2.6×8	Black	1
36	474 4201 019	SCREW 3×4		1
37	473 7002 021	TAPPING SCREW 3×8 (S)	Black	10

EXPLODED VIEW OF RC-33 REMOTE CONTROL UNIT



NOTE FOR PARTS LIST

- Part indicated with the mark " ⦿ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

- **Resistors**

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Fixed	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metallic film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

Resistance

1 8 2 ⇨ 1800Ω = 1.8kΩ
2 — Indicates number of zeros after effective number
1 8 — 2-digit effective number, decimal point indicated by R.
- Units: Ω

- **Capacitors**

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolyte	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolyte	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolyte	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For charge and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V		C : CSA part
CM : Mica	2B : 125V	P : +100% −0%	W : UL-CSA type
CF : Metallized	2C : 160V		F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

Capacity

2 R 2 ⇨ 2.2μF
2 — 1-digit effective number, decimal point indicated by R.
2 R — 2-digit effective number, decimal point indicated by R.
- Units: μF, (for P, pF (μμF)
- When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

PRINTED WIRING BOARD PARTS LIST
GU-2244/2340 POWER PWB UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC700~702	268 0076 902	IC ICP-N38T	
IC703,704	263 0553 006	IC NJM7805FA	
IC705	262 1479 005	IC M5M34051P	
IC710,711	268 0078 900	IC ICP-N75T	ASIA model only
TR720~723	274 0160 907	Transistor 2SD2144STPU	
D700~703	276 0592 908	Diode RB100AT-62	
D704~711	276 0553 905	Diode 1SR35-200A (T93X)	
D720	276 0438 949	Diode MA151WK	
D722	276 0438 949	Diode MA151WK	
D721	276 0438 907	Diode MA151WA	
D723	276 0438 907	Diode MA151WA	
LE700,701	393 9488 004	LED SPB-26	Red/Green
LE702,703	393 9486 006	LED SLB-26VR	Red
RESISTORS GROUP			
R720~723	247 0005 905	Chip 100kohm,1/10W	RM73B--101JT
R724, 725	247 0009 901	Chip 4.7kohm,1/10W	RM73B--472JT
CAPACITORS GROUP			
C700	254 4255 720	Electrolytic 6800μF/16V	CE04W1C682MC(SME)
C701~703	254 4255 717	Electrolytic 4700μF/16V	CE04W1C472MC(SME)
C711	254 4254 941	Electrolytic 100μF/16V	CE04W1C101MT(SME)
C710	253 8014 702	Ceramic 0.01μF/400V	CK45F2GAC103MC
C720~723	257 0004 961	Ceramic 100pF/50V	CC73SL1H101J
C724	253 9036 909	Ceramic 0.1μF/25V	CK45=1E104ZT
OTHER GROUP			
L700	235 0054 005	AC LINE FILTER	
L701,702	235 0049 900	BEAD INDUCTOR	
	202 0022 008	FUSE HOLDER	
⚠F700	206 1039 050	FUSE 1.6A	U.S.A. model only
⚠F700	206 1015 029	FUSE 1A	ASIA model only
CB700	205 0581 001	2P VH CONNECTOR BASE (WHT)	AC INPUT
CB701	205 0217 029	2P CONNECTOR BASE(ULTR)	POWER SWITCH
CB702	205 0233 087	8P EH CONNECTOR BASE(WHT)	
CB703	205 0322 008	10P CONNECTOR BASE(BLU)	
CB704	205 0323 007	10P CONNECTOR BASE(BLK)	
CB705	205 0322 095	9P CONNECTOR BASE(BLU)	
CB706	205 0323 094	9P CONNECTOR BASE(BLK)	
CB707	205 0680 083	8P MD CONNECTOR BASE	Mini DIN
CB708	204 8265 009	4P RCA PIN JACK (EMI)	
CB709	205 0321 083	8P CONNECTOR BASE(RED)	
CB710	205 0355 033	3P KR BASE(L)	
CB711	205 0395 035	3P KR CONNECTOR BASE(L) RED	
CB720	205 0217 058	5P CONNECTOR BASE(ULTR)	ASIA model only
CB722	205 0234 044	4P EH SIDE BASE	
CB723	205 0588 046	4P EH SIDE BASE(RED)	
CB724	205 0276 044	4P EH CONNECTOR BASE(BLK)	
CC702	205 0278 042	4P EH CONNECTOR BASE(BLK)	
CC709	205 0355 088	8P KR CONNECTOR BASE(L)	
	203 8291 009	5P CONNECTOR CORD	ASIA model only
	205 0217 058	5P CONNECTOR BASE(ULTR)	ASIA model only
CC710,711	203 4689 000	3P KR CONNECTOR CORD	
SW700,701	212 4759 002	TACT SW W/LED(GRN)	
	443 1134 004	SPACER(A)	Spacer for LE702,703
	443 1135 003	SPACER(B)	Spacer for LE700,701
⚠	212 3315 023	VOLTAGE SELECTOR	ASIA model only
⚠	206 2086 002	AC CORD W/CONNECTOR	U.S.A. model only
⚠	206 2088 000	AC CORD W/CONNECTOR	ASIA model only
⚠	233 5891 005	POWER TRANS	U.S.A. model only
⚠	233 5892 004	POWER TRANS	ASIA model only

GU-2242 MECHA PWB UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC1	262 1342 006	IC CXA1372Q	
IC2	262 1304 002	IC CXD2500Q	
IC3	262 1344 907	IC SN74LS624NSR	
IC004,005	263 0615 902	IC BA15218F	
IC303, 304	263 0615 902	IC BA15218F	
IC6	263 0805 903	IC BA6296FP	
IC8	262 1205 907	IC TC74HCU04AF	
IC200	262 1473 001	IC µPD78233GJ-5BG	
IC201	262 1474 000	IC µPD6381GF	
IC202,203	262 1475 009	IC µPD424256V-10	
IC204	262 0943 901	IC HD74HC373FP-TL	
IC205	262 1328 004	IC HN27C256G-17	
IC206	262 0678 001	IC MN1280-S	
IC300	262 1236 905	IC CDX2551M	
IC301,302	262 1409 004	IC PCM61P-L	
IC311	263 0432 907	IC NJM78L05AT	
IC312	263 0722 905	IC NJM79L05AT	
IC350	262 0678 001	IC MN1280-S	
TR70	274 0036 905	Transistor 2SD468(C)TF	
TR71	272 0025 907	Transistor2SB562(C)TF	
TR80,81	269 0083 901	Transistor DTA114EKT96	
TR82	269 0082 902	Transistor DTC114EKT96	
TR300	269 0083 901	Transistor DTA114EKT96	
TR301	269 0082 902	Transistor DTC114EKT96	
TR302,303	274 0160 907	Transistor 2SD2144STPU	
D200	276 0438 910	Diode MA151A	
D400	276 0533 909	Zener Diode MA-3047-TX	
LE1	393 9487 005	LED SLA-580LT(XP)	
RESISTORS GROUP			
R20	247 0010 987	Chip 27kohm, 1/10W	RM73B--273JT
R21	247 0012 927	Chip 100kohm, 1/10W	RM73B--104JT
R22	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R23	247 0012 930	Chip 110kohm, 1/10W	RM73B--114JT
R24,25	247 0009 985	Chip10kohm, 1/10W	RM73B--103JT
R26	247 0011 960	Chip 56kohm, 1/10W	RM73B--563JT
R27	247 0011 928	Chip 39kohm, 1/10W	RM73B--393JT
R28	247 0009 956	Chip 7.5kohm, 1/10W	RM73B--752JT
R30	247 0012 927	Chip 100kohm, 1/10W	RM73B--104JT
R31	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R34	247 0012 943	Chip 120kohm, 1/10W	RM73B--124JT
R47	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R38	247 0012 927	Chip 100kohm, 1/10W	RM73B--104JT
R39	247 0012 914	Chip 91kohm, 1/10W	RM73B--913JT
R40	247 0011 944	Chip 47kohm, 1/10W	RM73B--473JT
R43	247 0011 986	Chip 68kohm, 1/10W	RM73B--683JT
R44	247 0009 969	Chip 8.2kohm, 1/10W	RM73B--822JT
R45	247 0014 925	Chip 680ohm, 1/10W	RM73B--684JT
R46	247 0012 943	Chip 120kohm, 1/10W	RM73B--124JT
R50,51	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R52	247 0011 944	Chip 47kohm, 1/10W	RM73B--473JT
R53	247 0009 956	Chip 7.5kohm, 1/10W	RM73B--752JT
R54	247 0008 931	Chip 2.4kohm, 1/10W	RM73B--242JT
R55	247 0011 944	Chip 47kohm, 1/10W	RM73B--473JT
R56	247 0009 985	Chip 10kohm,1/10W	RM73B--103JT
R57	247 0010 929	Chip 15kohm, 1/10W	RM73B--153JT
R59	247 0005 989	Chip 220ohm, 1/10W	RM73B--221JT
R60	247 0009 901	Chip 4.7kohm, 1/10W	RM73B--472JT
R61	247 0006 962	Chip 470ohm, 1/10W	RM73B--471JT
R62	247 0011 902	Chip 33kohm, 1/10W	RM73B--333JT
R63	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R64,65	247 0008 960	Chip 3.3kohm, 1/10W	RM73B--332JT
R66	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R67	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R68	247 0010 929	Chip 15kohm, 1/10W	RM73B--153JT
R69	247 0010 916	Chip 13kohm, 1/10W	RM73B--133JT
R70,71	247 0006 962	Chip 470ohm, 1/10W	RM73B--471JT
R72,73	247 0012 956	Chip 130kohm, 1/10W	RM73B--134JT
R75	247 0011 999	Chip 75kohm, 1/10W	RM73B--753JT
R77	247 0011 986	Chip 68kohm, 1/10W	RM73B--683JT
R78	247 0005 989	Chip 220ohm, 1/10W	RM73B--221JT
R79	244 2051 945	Metallic 1ohm, 1W	RS14B3A010JST
R80	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R81,82	247 0005 989	Chip 220ohm, 1/10W	RM73B--221JT
R74	247 0010 945	Chip 18kohm, 1/10W	RM73B--183JT
R75	247 0011 999	Chip 75kohm, 1/10W	RM73B--753JT
R76	247 0010 945	Chip 18ohm, 1/10W	RM73B--183JT
R83,84	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R85	247 0005 989	Chip 220kohm, 1/10W	RM73B--221JT
R200	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R202~205	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R250	247 0007 945	Chip 1kohm, 1/10W	RM73B--102JT
R303~306	247 0007 945	Chip 1kohm, 1/10W	RM73B--102JT
R310	247 0011 944	Chip 47kohm, 1/10W	RM73B--473JT
R311	247 0014 967	Chip 1Mohm, 1/10W	RM73B--105JT
R312	247 0013 984	Chip 470kohm, 1/10W	RM73B--474JT
R313	247 0012 998	Chip 200kohm, 1/10W	RM73B--204JT
R314	247 0009 998	Chip 11kohm, 1/10W	RM73B--113JT
R315	247 0009 927	Chip 5.6kohm, 1/10W	RM73B--562JT
R316	247 0009 998	Chip 11kohm, 1/10W	RM73B--113JT
R317	247 0010 945	Chip18kohm, 1/10W	RM73B--183JT
R318	247 0010 958	Chip 20kohm, 1/10W	RM73B--203JT
R319	247 0010 990	Chip 30kohm, 1/10W	RM73B--303JT
R320	247 0008 902	Chip 1.8kohm, 1/10W	RM73B--182JT
R321	247 0009 901	Chip 4.7kohm, 1/10W	RM73B--472JT
R330	247 0011 944	Chip 47kohm, 1/10W	RM73B--473JT
R331	247 0014 967	Chip 1Mohm, 1/10W	RM73B--105JT
R332	247 0013 984	Chip 470kohm, 1/10W	RM73B--474JT
R333	247 0012 998	Chip 200kohm, 1/10W	RM73B--204JT
R334	247 0009 998	Chip 11kohm, 1/10W	RM73B--113JT
R335	247 0009 927	Chip 5.6kohm, 1/10W	RM73B--562JT
R336	247 0009 998	Chip 11kohm, 1/10W	RM73B--113JT
R337	247 0010 945	Chip 18kohm, 1/10W	RM73B--183JT
R338	247 0010 958	Chip 20kohm, 1/10W	RM73B--203JT
R339	247 0010 990	Chip 30kohm, 1/10W	RM73B--303JT
R340	247 0008 902	Chip 1.8kohm, 1/10W	RM73B--182JT
R341	247 0009 901	Chip 4.7kohm, 1/10W	RM73B--472JT
R350	247 0007 945	Chip 1kohm, 1/10W	RM73B--102JT

Ref. No.	Part No.	Part Name	Remarks
R351	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R401	247 0007 945	Chip 1kohm,1/10W	RM73B--102JT
R402	247 0012 969	Chip 150kohm, 1/10W	RM73B--154JT
VR1,2	211 6077 912	Variable 20kohm	V06PB203
VR300,301	211 6077 938	Variable 100kohm	V06PB104
CAPACITORS GROUP			
C1	254 4327 904	Electrolytic 1000pF/6.3V	CE04W0J102M(SMG)
C2	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C10	257 0010 900	Ceramic-chip 0.01µF/50V	CK73B1H103KT
C11	257 0009 937	Ceramic-chip 2700pF/50V	CK73B1H272KT
C12	257 0010 900	Ceramic-chip 0.01µF/50V	CK73B1H103KT
C13	257 1010 941	Ceramic-chip 3300pF/50V	CK73B1H332KT
C14	257 0006 943	Ceramic-chip 560pF/50V	CC73SL1H561JT
C15	257 1013 951	Ceramic-chip 0.047µF/25V	CK73B1E473KT
C16	257 1013 993	Ceramic-chip 0.1µF/25V	CK73B1E104KT
C17	257 1013 951	Ceramic-chip 0.047µF/25V	CK73B1E473KT
C18	257 0009 924	Ceramic-chip 2200pF/50V	CK73B1H222KT
C19	257 1013 993	Ceramic-chip 0.1µF/25V	CK73B1E104KT
C20	257 1013 980	Ceramic-chip 0.082µF/25V	CK73B1E823KT
C21	257 1011 966	Ceramic-chip 0.03µF/50V	CK73B1H333KT
C22	257 0004 961	Ceramic-chip 100pF/50V	CC73SL1H101JT
C24	254 4337 910	Electrolytic 6.8µF/50V	CE04W1H6R8MT(SME)
C25	256 1035 910	Metallized 0.22µF/50V	CF93A1H224JT
C26	257 0003 991	Ceramic-chip 51pF/50V	CC73SL1H510JT
C27	257 1013 993	Ceramic-chip 0.1µF/25V	CK73B1E104KT
C28	254 4260 977	Electrolytic 4.7µF/50V	CE04W1H4R7MT(SME)
C29	257 0004 961	Ceramic-chip 100pF/50V	CC73SL1H101JT
C30,31	257 0012 966	Ceramic-chip 0.01µF/50V	CK73F1H103ZT
C32	254 4260 919	Electrolytic 0.22µF/50V	CE04W1HR22MT(SME)
C33	257 1011 966	Ceramic-chip 0.03µF/50V	CK73B1H333KT
C35	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C40~43	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C44	257 0010 955	Ceramic-chip 0.027µF/50V	CK73B1H273KT
C45	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C46	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C47,48	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C51	257 0010 955	Ceramic-chip 0.027µF/50V	CK73B1H273KT
C60	254 4260 922	Electrolytic 0.33µF/50V	CE04W1HR33MT(SME)
C61	257 0003 959	Ceramic-chip 36pF/50V	CC73SL1H360JT
C62	257 1013 951	Ceramic-chip 0.047µF/25V	CK73B1E473KT
C63	257 0007 942	Ceramic-chip 1500pF/50V	CC73SL1H152JT
C64	257 0001 951	Ceramic-chip 3pF/50V	CC73SL1H3R0CT
C65	257 0001 977	Ceramic-chip 5pF/50V	CC73SL1H5R0CT
C66	254 4250 958	Electrolytic 470µF/6.3V	CE04W0J471MT(SME)
C67~70	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C70,71	254 4260 964	Electrolytic 3.3µF/50V	CE04W1H3R3MT(SME)
C200,201	257 0002 963	Ceramic-chip 15pF/50V	CC73SL1H150JT
C202~205	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C206,207	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C252	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C253	254 4256 936	Electrolytic 47µF/25V	CE04W1E470MT(SME)
C300	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C301	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C302	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT

Ref. No.	Part No.	Part Name	Remarks
C303	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
304~306	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C310,311	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C312	257 0007 926	Ceramic-chip 1200pF/50V	CC73SL1H122JT
C313	257 0005 931	Ceramic-chip 200pF/50V	CC73SL1H201JT
C315	254 4254 909	Electrolytic 10µF/16V	CE04W1C100MT(SME)
C330,331	257 0014 935	Ceramic-chip 0.1µF/25V	CK73F1E104ZT
C332	257 0007 926	Ceramic-chip 1200pF/50V	CC73SL1H122JT
C333	257 0005 931	Ceramic-chip 200pF/50V	CC73SL1H201JT
C335	254 4254 909	Electrolytic 10µF/16V	CE04W1C100MT(SME)
C400	257 0003 933	Ceramic 30pF/50V	CC73SL1H300JT
C401	257 0002 963	Ceramic 15pF/50V	CC73SL1H150JT
OTHER GROUP			
X1	399 0115 002	Ceramic OSC 16.93MHz	CSA16.93MX
X200	399 0038 008	Ceramic OSC 12.0MHZ	CST12.0MT
X201	399 0141 005	Ceramic OSC 24.57MHz	CSA24.57MX040
CB1	205 0681 008	12P FFC SIDE BASE	
CB2	205 0321 054	5P CONNECTOR BASE(RED)	
CB3	205 0343 058-	5P CONNECTOR BASE(KR-PH)	
CB4	205 0323 065	6P CONNECTOR BASE(BLK)	
CB5	205 0321 096	9P CONNECTOR BASE(RED)	
CB6	205 0375 000	10P CONNECTOR BASE(KR-PH)	
TP1	205 0190 065	6P NH CONNECTOR BASE	
TP2	205 0190 052	5P NH CONNECTOR BASE	
CC007	203 4649 008	3P DA-DA CON CORD	

2U-1644 MOTOR DRIVE UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC1	263 0424 902	IC M5218FP	
H1,2	268 0053 022	IC Holl IC	HW-101C(Q,R)
TR1	272 0081 909	Transistor 2SB766S	
TR2	274 0114 908	Transistor 2SD874R	
TR3	279 0024 909	Transistor FMY1-T99	
TR4	272 0081 909	Transistor 2SB766S	
TR5	274 0114 908	Transistor 2SD874R	
TR6	279 0024 909	Transistor FMY1-T99	
RESISTORS GROUP			
R1	247 1006 961	Chip 470ohm, 1/8W	RM73B2B471JT
R2	247 0006 904	Chip 270ohm, 1/10W	RM73B--271JT
R3	247 0009 985	Chip 10kohm, 1/10W	RM73B--103JT
R4	247 1012 926	Chip 100kohm, 1/8W	RM73B2B104JT
R5	247 0012 927	Chip 100kohm, 1/10W	RM73B--104JT
R6,7	247 1008 985	Chip 3.9kohm, 1/8W	RM73B2B392JT
R8	247 1006 961	Chip 470ohm, 1/8W	RM73B2B471JT
R9	247 1006 903	Chip 270ohm, 1/8W	RM73B2B271JT
R10	247 1009 984	Chip 10kohm, 1/8W	RM73B2B103JT
R11	247 1012 926	Chip 100kohm, 1/8W	RM73B2B104JT
R12	247 0012 927	Chip 100kohm, 1/10W	RM73B--104JT
R13,14	247 1008 985	Chip 3.9kohm, 1/8W	RM73B2B392JT
R15	247 1007 902	Chip 680ohm, 1/8W	RM73B2B681JT
VR1	211 8003 913	Semi fixed resistor 2kohm	K05= B202
CAPACITORS GROUP			
C01	257 0006 927	Ceramic-chip 470pF/50V	CC73SL1H471JT
C03	257 1006 926	Ceramic-chip 470pF/50V	CC73SL1H471JT
C05	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104ZT
C07	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104ZT
OTHER GROUP			
	346 0070 004	ROTOR COIL	
	204 0230 016	6P Connector Cord(BLK)	

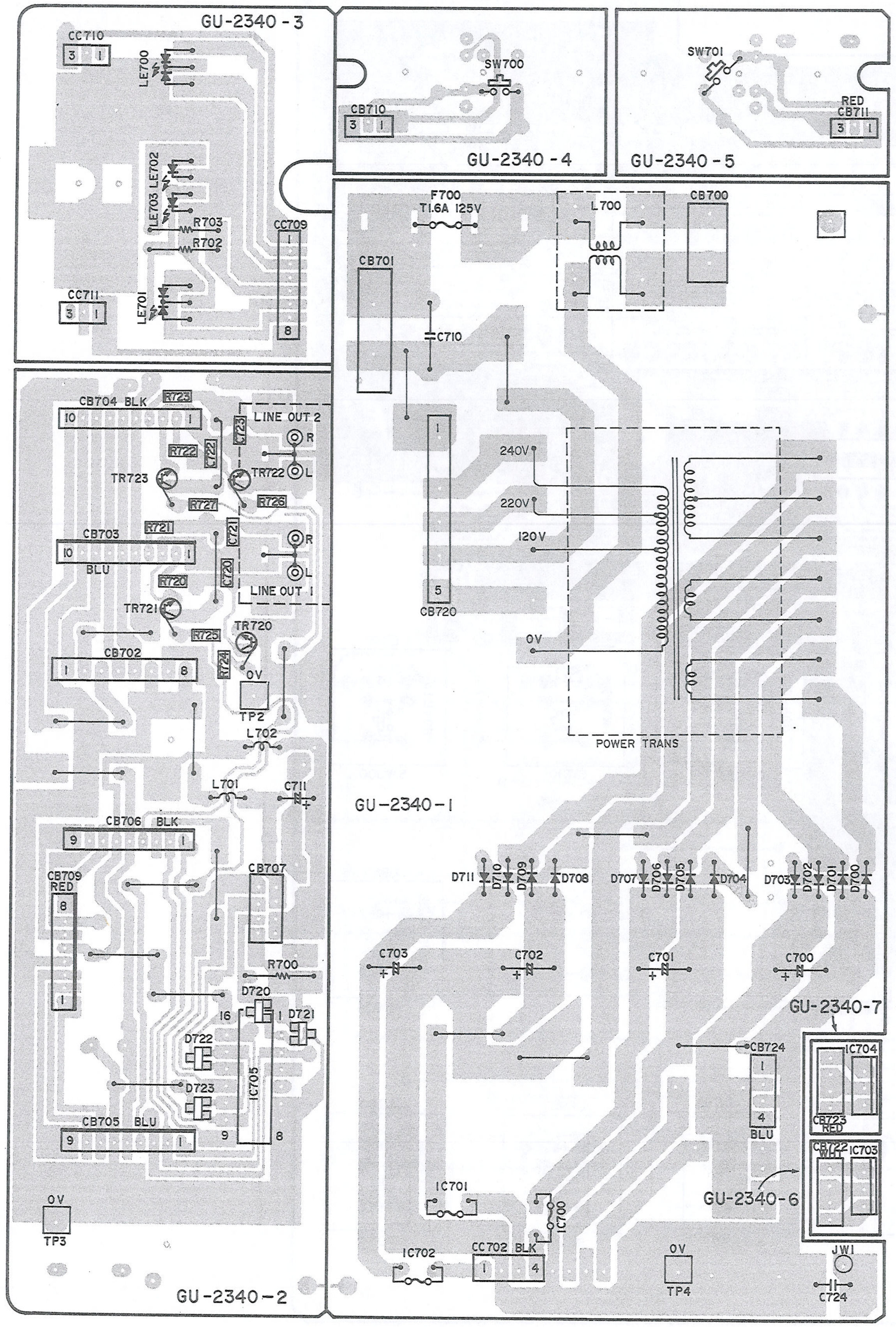
GU-2248 REMOTE CONTROL UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC800	262 1473 001	IC μPD78233GJ-5BG	
IC801~803	262 0943 901	IC HD74HC373FP-TL	
IC804	262 1328 004	IC HN27C256G-17	
IC805	262 1351 000	IC SN75179BP	
IC807	262 0950 907	IC HD74LS74AFP-TL	
IC900	262 1591006	IC M74HCT138-1P	
IC901	262 1160 000	IC TC74HC138AP	
TR900~921	269 0091 906	Transistor DTC143TKT96	
TR930~935	272 0081 909	Tranisstor 2SB766S	
D800~803	276 0438 910	Diode MA151A	
D900~902	276 0438 910	Diode MA151A	
LE900	393 9411 000	LED LB602VA2	7 Segments (Track)
LE901,902	393 9485 007	LED LB-402VD	7 Segments (Minute, Second)
LE903	393 9411 000	LED LB602VA2	7 Segments (Track)
LE904,905	393 9485 007	LED LB-402VD	7 Segments (Minute, Second)
LE906,907	393 9496 009	LED MU03-5202(GRN)	(CD-1, CD-2)
LE910	393 9476 016	LED SLB-25VR3F(RED)	(Shuttle Monitor)
LE911~917	393 9486 019	LED SLB-26DU	Orange (Shuttle Monitor)
LE918	393 9476 016	LED SLB-25VR3F(RED)	(Shuttle Monitor)
LE919~925	393 9486 019	LED SLB-26DU	Orange (Shuttle Monitor)
LE926	393 9476 016	LED SLB-25VR3F(RED)	(Shuttle Monitor)
RESISTORS GROUP			
R800,801	247 1009 984	Chip 10kohm, 1/8W	RM73B2B103JT
R802,803	247 1007 944	Chip 1kohm, 1/8W	RM73B2B102JT
R804	247 1005 904	Chip 100ohm, 1/8W	RM73B2B101JT
R805~808	247 1010 960	Chip 22kohm, 1/8W	RM73B2B223JT
R809	247 1008 943	Chip 2.7kohm, 1/8W	RM73B2B272JT
R810	247 1009 926	Chip 5.6kohm, 1/8W	RM73B2B562JT
R900~921	247 1004 976	Chip 75ohm, 1/8W	RM73B2B750JT
R930~935	247 1006 929	Chip 330ohm, 1/8W	RM73B2B331JT
R936	247 1009 984	Chip 10kohm, 1/8W	RM73B2B103JT
CAPACITORS GROUP			
C800,801	257 0005 944	Ceramic-chip 1000μF/50V	CC73SL1H221JT
C802~812	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104ZT
C900~902	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104ZT
C910~912	254 4300 060	Electrolytic 100pF/6.3V	CE04W0J101M(SRE)
C820,821	254 4250 042	Electrolytic 330pF/6.3V	CE04W0J331M(SME)
C822	254 4260 061	Electrolytic 3.3μF/50V	CE04W1H3R3M(SME)
OTHER GROUP			
SW800	212 0330 001	ROTARY SWITCH(SRGF)	
SW900~906	212 4759 002	TACT SW w/LED(GRN)	
SW907	212 4759 028	TACT SW w/LED(GRN)	
SW908	212 4759 015	TACT SW w/LED(RED)	
SW909	212 4759 002	TACT SW w/LED(GRN)	

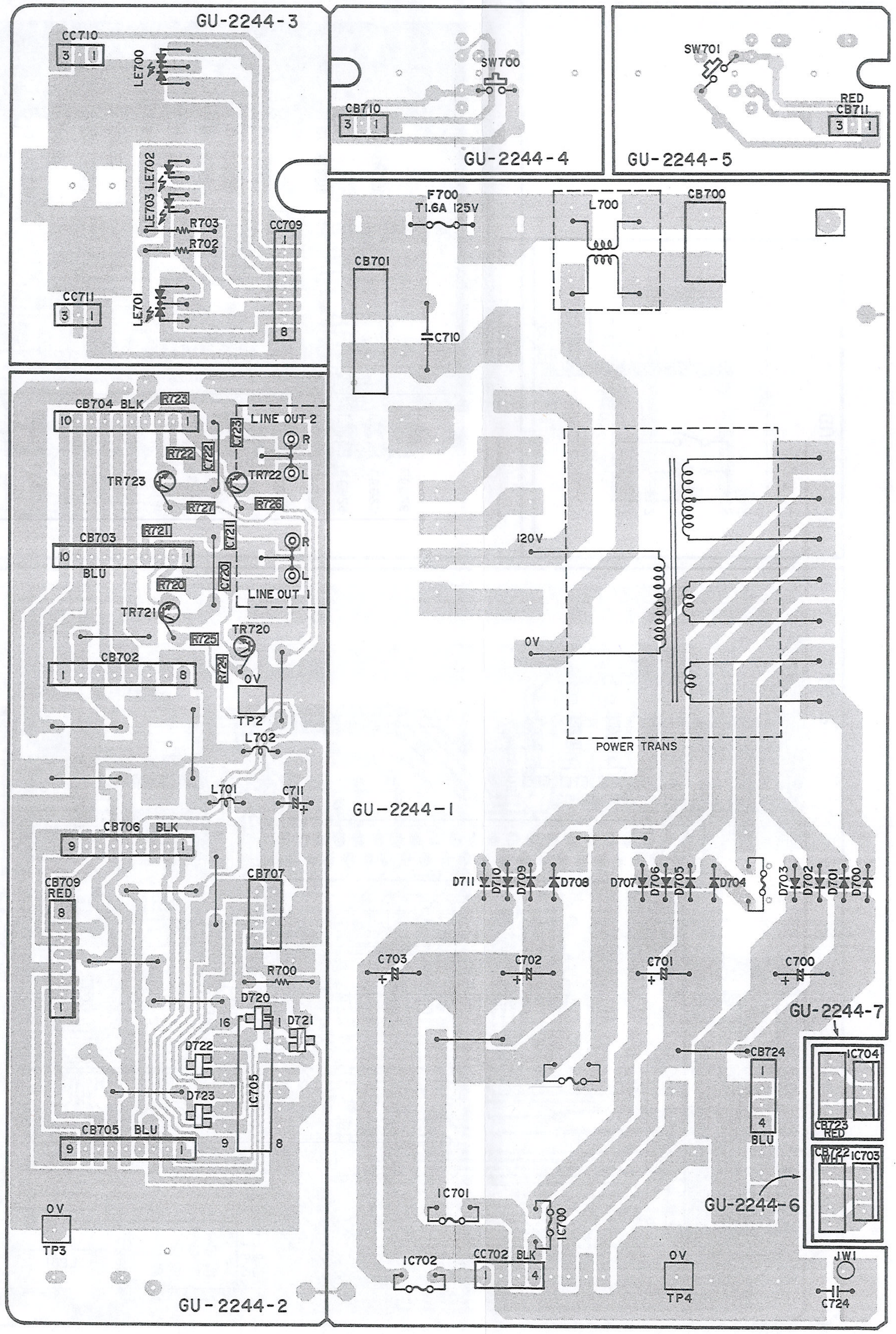
Ref. No.	Part No.	Part Name	Remarks
X800	399 0038 008	Ceramic OSC (12.0MHz)	CST12.0MT
CB800	205 0491 081	40P FFC BASE	
CB801	205 0543 036	3P CONNECTOR BASE(YEL)	
CB802	205 0680 083	8P MD CONNECTOR BASE	
CB900	205 0673 003	40P FFC SIDE CONN. BASE	
CC800	009 0054 008	40P FFC	
CC801	203 4638 006	3P KR-DS CON. CORD	
L800,801	235 0049 007	BEADS INDUCTOR	

PRINTED WIRING BOARD PATTERNS

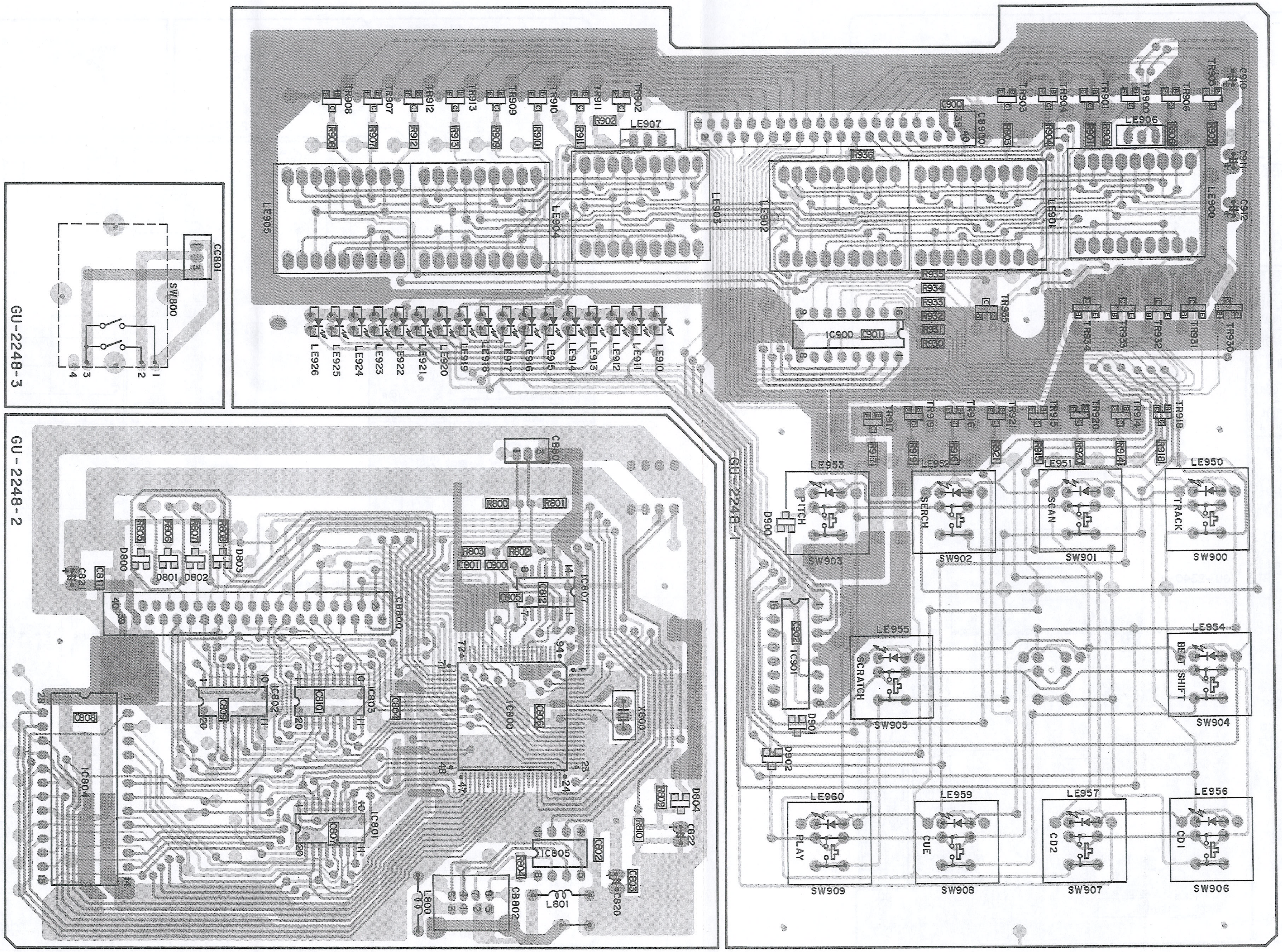
EU-2224 POWER PWB UNIT (U.S.A. Model)


GU-2340-3
CC710
LE700
LE703
LE702
R703
R702
CC709
CC711
LE701
SW700
CB710
GU-2340-4
SW701
RED
CB711
GU-2340-5
F700
T1.6A 125V
L700
CB700
CB701
C710
CB704 BLK
R723
LINE OUT 2
R
L
R722
C723
TR723
TR722
R727
R726
CB703
R721
BLU
C721
C720
R720
LINE OUT 1
TR721
R725
TR720
R724
CB702
0V
TP2
L702
L701
C711
240V
220V
120V
CB720
POWER TRANS
GU-2340-1
CB706 BLK
CB709
RED
CB707
D711
D710
D709
D708
D707
D706
D705
D704
D703
D702
D701
D700
C703
C702
C701
C700
R700
D720
D721
D722
D723
IC705
GU-2340-7
CB724
IC704
BLU
CB723
RED
CB722
WHT
IC703
CB705 BLU
GU-2340-6
IC701
IC700
IC702
CC702 BLK
0V
TP3
TP4
JW1
C724
GU-2340-2

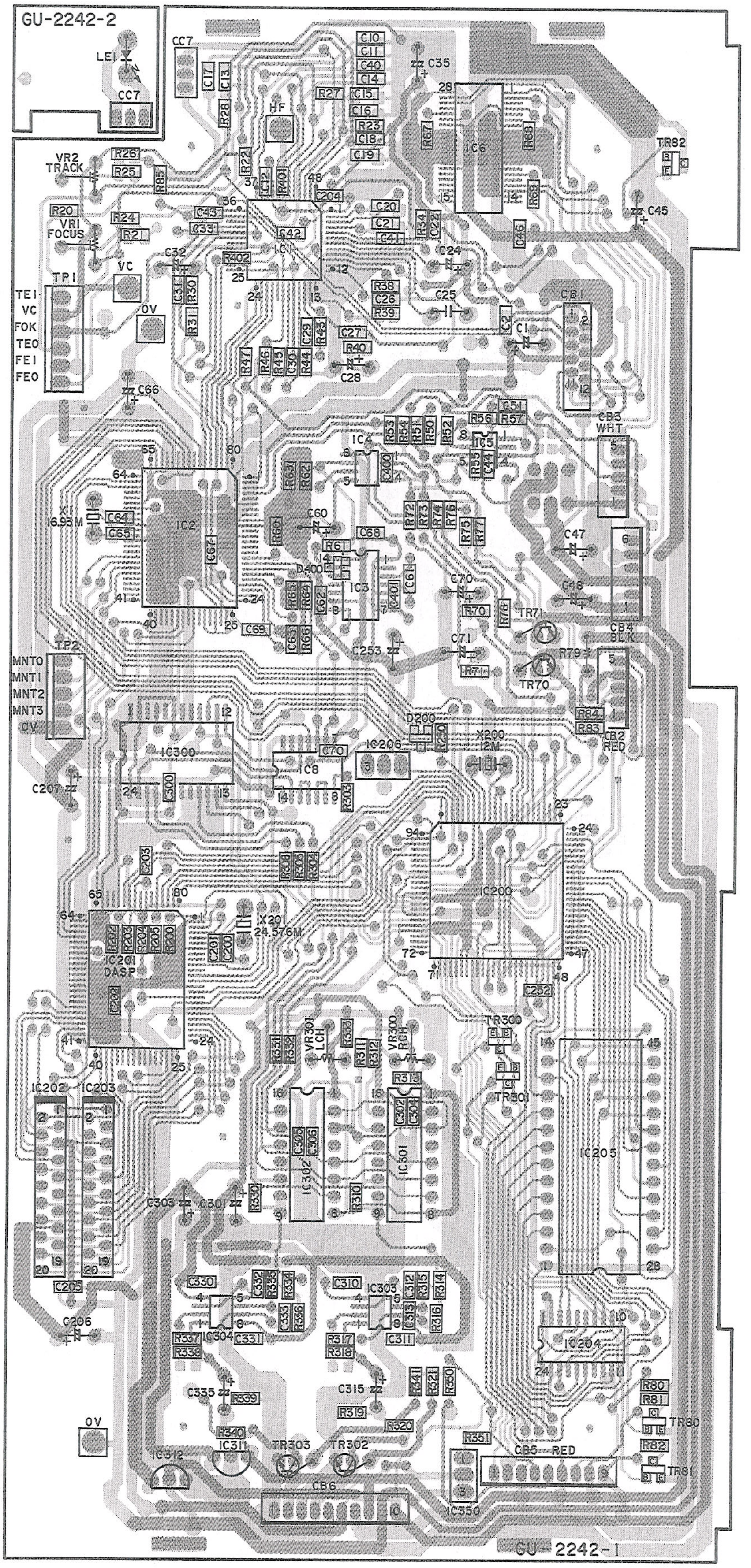
GU-2340 POWER PWB UNIT (Asia Model)


GU-2244-3
CC710
LE700
LE703
LE702
R703
R702
CC709
CC711
LE701
SW700
CB710
GU-2244-4
SW701
RED
CB711
GU-2244-5
F700
T1.6A 125V
L700
CB700
CB701
C710
CB704 BLK
R723
LINE OUT 2
R
L
R722
C723
TR723
TR722
R727
R726
CB703
R721
BLU
C721
C720
R720
LINE OUT 1
TR721
R725
TR720
R724
CB702
0V
TP2
L702
L701
C711
120V
POWER TRANS
GU-2244-1
CB706 BLK
CB709
RED
CB707
D711
D710
D709
D708
D707
D706
D705
D704
D703
D702
D701
D700
C703
C702
C701
C700
R700
D720
D721
D722
D723
IC705
GU-2244-7
CB724
IC704
BLU
CB723
RED
CB722
WHT
IC703
CB705 BLU
GU-2244-6
IC701
IC700
IC702
CC702 BLK
0V
TP3
TP4
JW1
C724
GU-2244-2

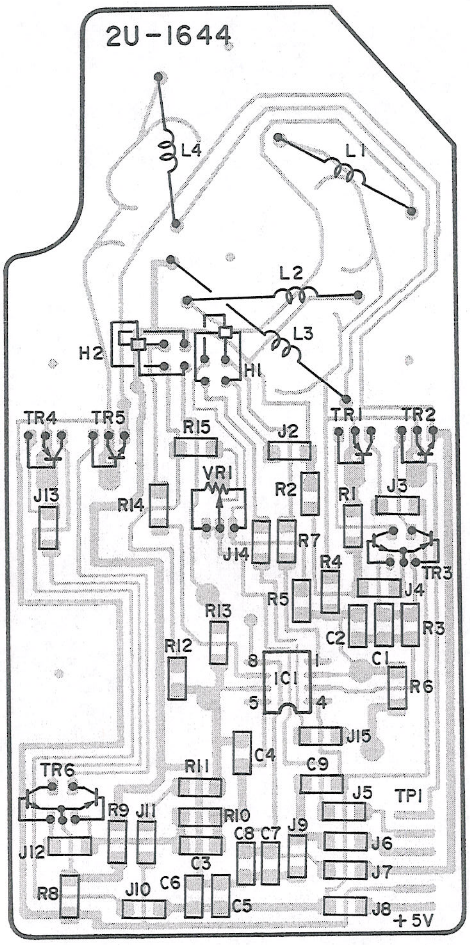
GU-2248 CONTROL PMB UNIT


GU-2248-3
CC801
SW800
GU-2248-2
GU-2248-1
LE900
LE901
LE902
LE903
LE904
LE905
LE906
LE907
LE910
LE911
LE912
LE913
LE914
LE915
LE916
LE917
LE918
LE919
LE920
LE921
LE922
LE923
LE924
LE925
LE926
TR900
TR901
TR902
TR903
TR904
TR905
TR906
TR907
TR908
TR909
TR910
TR911
TR912
TR913
TR914
TR915
TR916
TR917
TR918
TR919
TR920
TR921
TR930
TR931
TR932
TR933
TR934
TR935
CB900
C900
C910
C911
C912
R936
R930
R931
R932
R933
R934
R935
IC900
C901
LE953
LE952
LE951
LE950
PITCH
SEARCH
SCAN
TRACK
D900
SW903
SW902
SW901
SW900
LE955
LE954
SCRATCH
BEAT SHIFT
IC901
C902
D901
D902
SW905
SW904
LE960
LE959
LE957
LE956
PLAY
CUE
CD2
CD1
SW909
SW908
SW907
SW906
CB801
R800
R801
R802
R803
C800
C801
C805
C812
IC807
R805
R806
R807
R808
D800
D801
D802
D803
C811
C821
CB800
IC802
IC803
C809
C810
C804
IC800
C806
X800
IC804
C808
IC801
C807
IC805
C802
C803
R804
R809
R810
D804
C822
C820
L800
L801
CB802

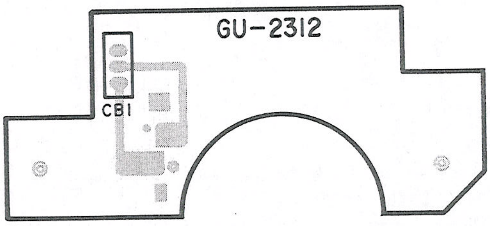
GU-2242 MECHA UNIT


GU-2242-2
LE1
CC7
CC7
C17
C13
R28
HF
C10
C11
C40
C14
C15
C16
R23
C18
C19
R27
C35
28
IC6
R67
R68
15
14
R69
C46
TR82
C45
VR2
TRACK
R26
R25
R85
R22
37
C12
R401
48
C204
36
C43
C33
C42
IC1
R20
VR1
FOCUS
R24
R21
C32
R402
25
24
12
13
C20
C21
C41
R34
C22
C24
C25
R38
C26
R39
TP1
TE1
VC
FOK
TE0
FE1
FE0
VC
0V
C31
R30
R31
R47
R46
R45
C30
R44
C29
R43
C27
R40
C28
CB1
C2
C1
C66
65
64
80
1
IC2
X1
16.93M
C64
C65
C67
41
40
24
25
C69
R63
R62
R60
C60
R61
D400
C68
IC4
C400
R53
R54
R51
R50
R52
R56
R57
C51
IC5
R55
C44
CB3
WHT
IC3
C401
C61
R65
R64
C62
C63
R66
R72
R73
R74
R76
R75
R77
C47
C48
C70
R70
R78
TR71
C71
R71
C253
R79
TR70
CB4
BLK
TP2
MNT0
MNT1
MNT2
MNT3
0V
IC300
C300
C207
IC8
C70
IC206
R303
D200
R230
X200
12M
R84
R83
CB2
RED
94
23
IC200
72
71
47
48
C252
C203
R306
R305
R304
IC201
DASP
R202
R203
R204
R205
R200
C202
X201
24.576M
C201
C200
IC202
IC203
C205
C206
R351
R352
VR301
LCH
R353
R311
R312
VR300
RCH
R313
IC302
C305
C306
IC301
C302
C304
R310
TR300
TR301
IC205
R330
C303
C301
C330
R332
R335
R334
R333
R336
IC304
C331
R337
R338
C310
IC303
C312
R315
R314
C313
R316
C311
R317
R318
C335
R339
C315
R319
R341
R321
R350
R320
IC204
R80
R81
TR80
R82
TR81
0V
R340
IC311
IC312
TR303
TR302
CB6
CB5
RED
IC350
GU-2242-1

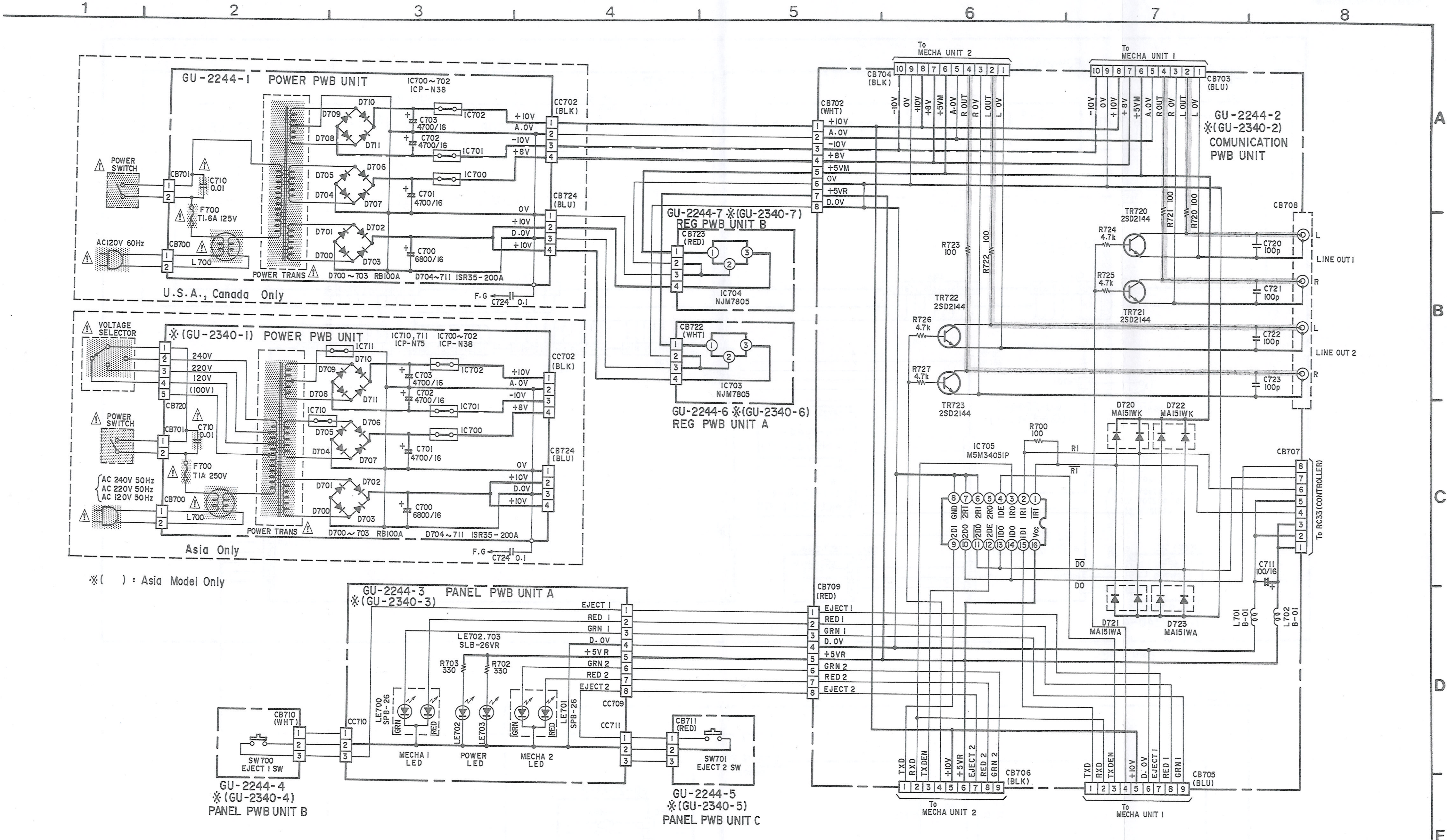
2U-1644 MOTOR DRIVE UNIT


2U-1644
L4
L1
L2
L3
H2
H1
TR4
TR5
R15
J2
TR1
TR2
VR1
R2
R1
J3
J13
R14
R7
J14
R4
TR3
J4
R5
R13
C2
R3
R12
8
1
C1
IC1
R6
5
4
J15
C4
C9
R11
TR6
J5
TP1
R9
J11
R10
C8
C7
J9
J6
J12
C3
J7
R8
J10
C6
C5
J8
+5V

GU-2312 INNER SW. UNIT



SCHEMATIC DIAGRAM (CONTROL UNIT)

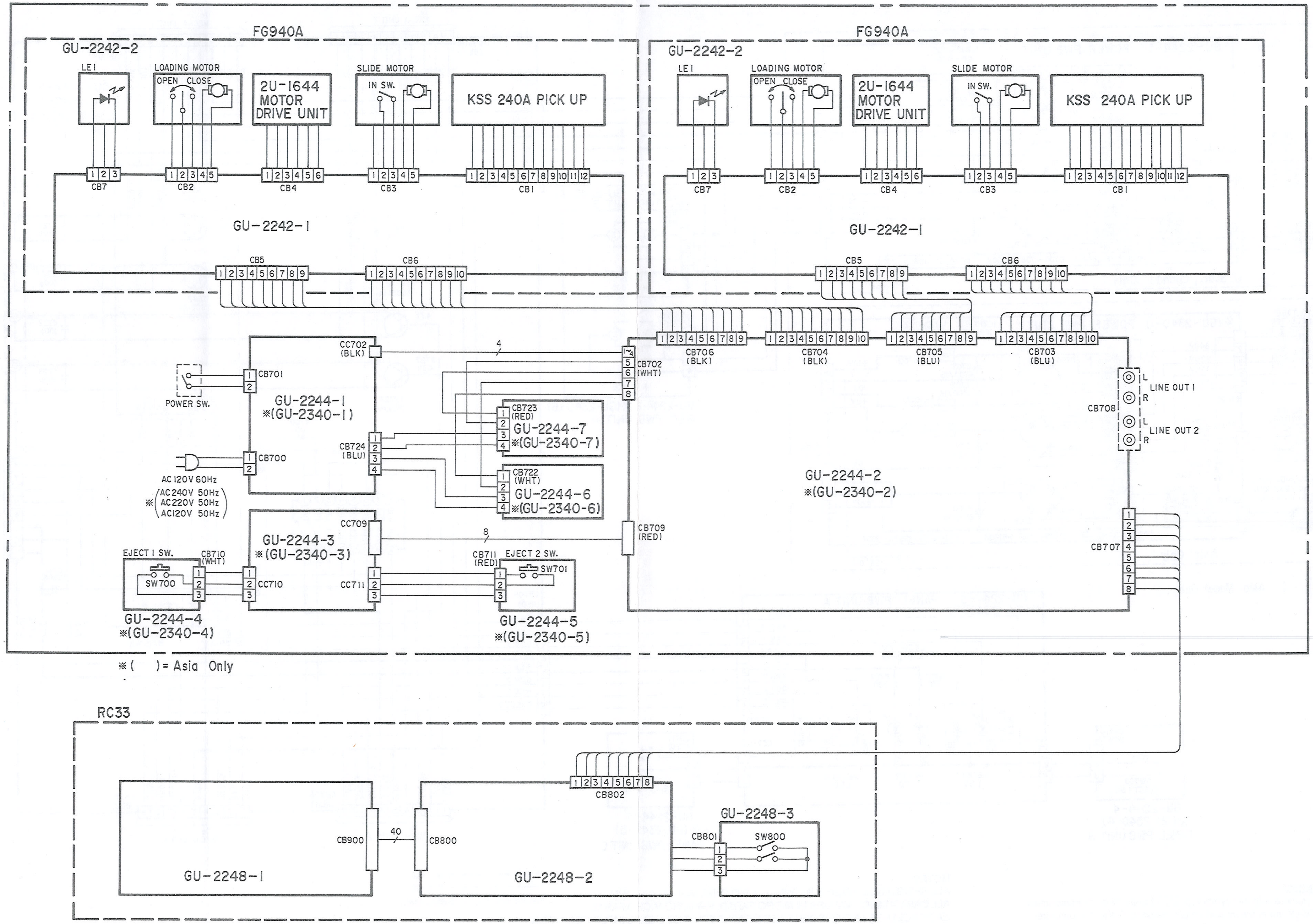

1
2
3
4
5
6
7
8
A
B
C
D
E
GU-2244-1 POWER PWB UNIT
IC700~702 ICP-N38
POWER SWITCH
AC120V 60Hz
F700 T1.6A 125V
C710 0.01
CB701
CB700
L700
POWER TRANS
D700~703 RB100A
D704~711 ISR35-200A
C703 4700/16
C702 4700/16
C701 4700/16
C700 6800/16
IC702
IC701
IC700
CC702 (BLK)
CB724 (BLU)
+10V
A.0V
-10V
+8V
0V
D.0V
F.G
C724 0.1
U.S.A., Canada Only
VOLTAGE SELECTOR
※(GU-2340-1) POWER PWB UNIT
IC710,711 ICP-N75
240V
220V
120V
(100V)
CB720
AC 240V 50Hz
AC 220V 50Hz
AC 120V 50Hz
F700 T1A 250V
IC711
IC710
Asia Only
※( ) : Asia Model Only
GU-2244-7 ※(GU-2340-7) REG PWB UNIT B
CB723 (RED)
IC704 NJM7805
CB722 (WHT)
IC703 NJM7805
GU-2244-6 ※(GU-2340-6) REG PWB UNIT A
CB702 (WHT)
+5VM
+5VR
To MECHA UNIT 2
CB704 (BLK)
To MECHA UNIT 1
CB703 (BLU)
R OUT
R 0V
L OUT
L 0V
GU-2244-2 ※(GU-2340-2) COMUNICATION PWB UNIT
CB708
LINE OUT 1
LINE OUT 2
TR720 2SD2144
TR721 2SD2144
TR722 2SD2144
TR723 2SD2144
R720 100
R721 100
R722 100
R723 100
R724 4.7k
R725 4.7k
R726 4.7k
R727 4.7k
C720 100p
C721 100p
C722 100p
C723 100p
D720 MA151WK
D722 MA151WK
D721 MA151WA
D723 MA151WA
R700 100
IC705 M5M34051P
RI
DO
CB707
To RC33 (CONTROLLER)
C711 100/16
L701 B-01
L702 B-01
CB709 (RED)
EJECT 1
RED 1
GRN 1
EJECT 2
RED 2
GRN 2
GU-2244-3 ※(GU-2340-3) PANEL PWB UNIT A
LE702.703 SLB-26VR
R703 330
R702 330
LE700 SPB-26
LE701 SPB-26
MECHA 1 LED
POWER LED
MECHA 2 LED
CC709
CC710
CC711
CB710 (WHT)
SW700 EJECT 1 SW
GU-2244-4 ※(GU-2340-4) PANEL PWB UNIT B
CB711 (RED)
SW701 EJECT 2 SW
GU-2244-5 ※(GU-2340-5) PANEL PWB UNIT C
TXD
RXD
TXDEN
CB706 (BLK)
CB705 (BLU)

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

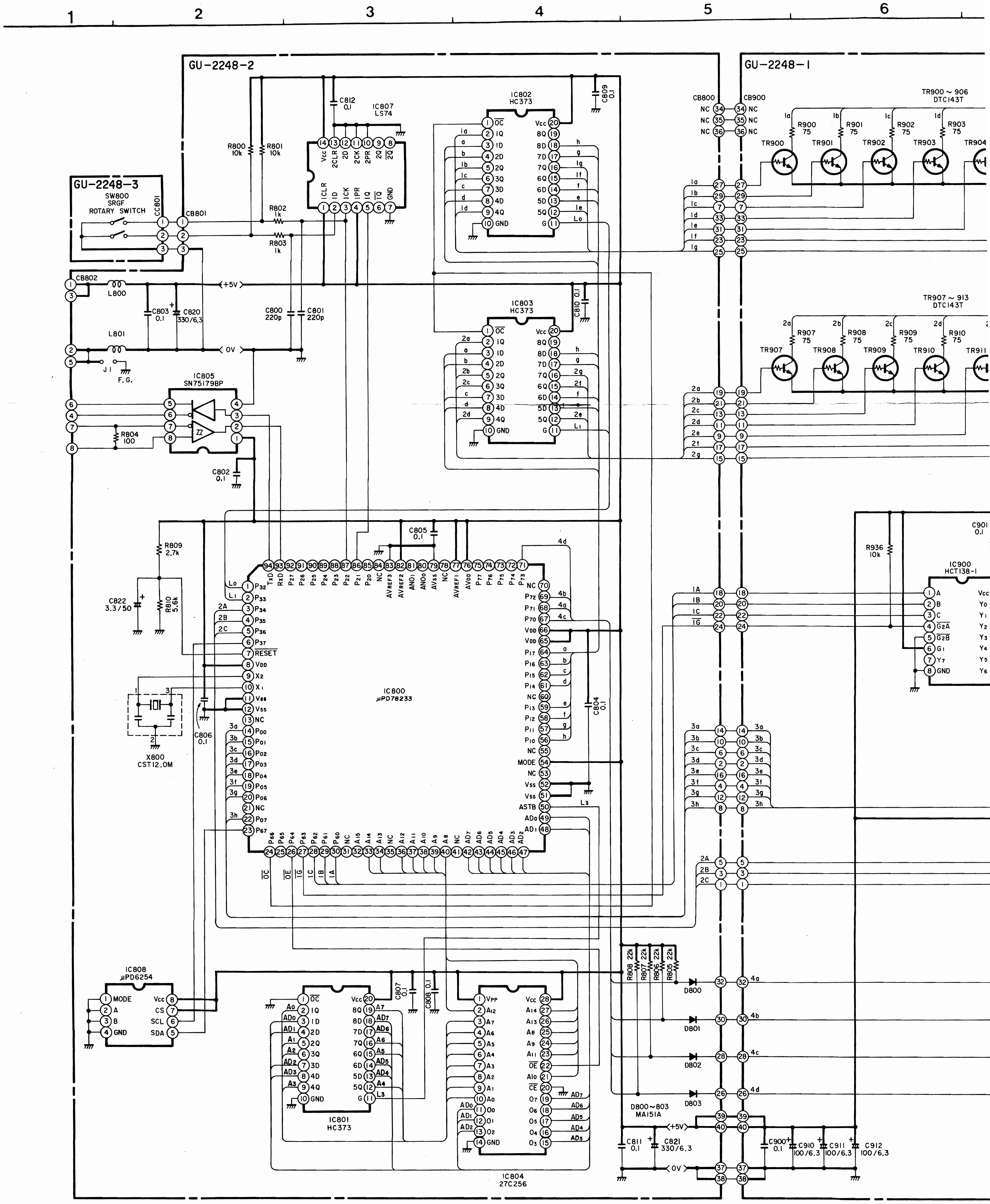
——— +B LINE
– – – –B LINE
▨ SIGNAL LINE

WIRING DIAGRAM

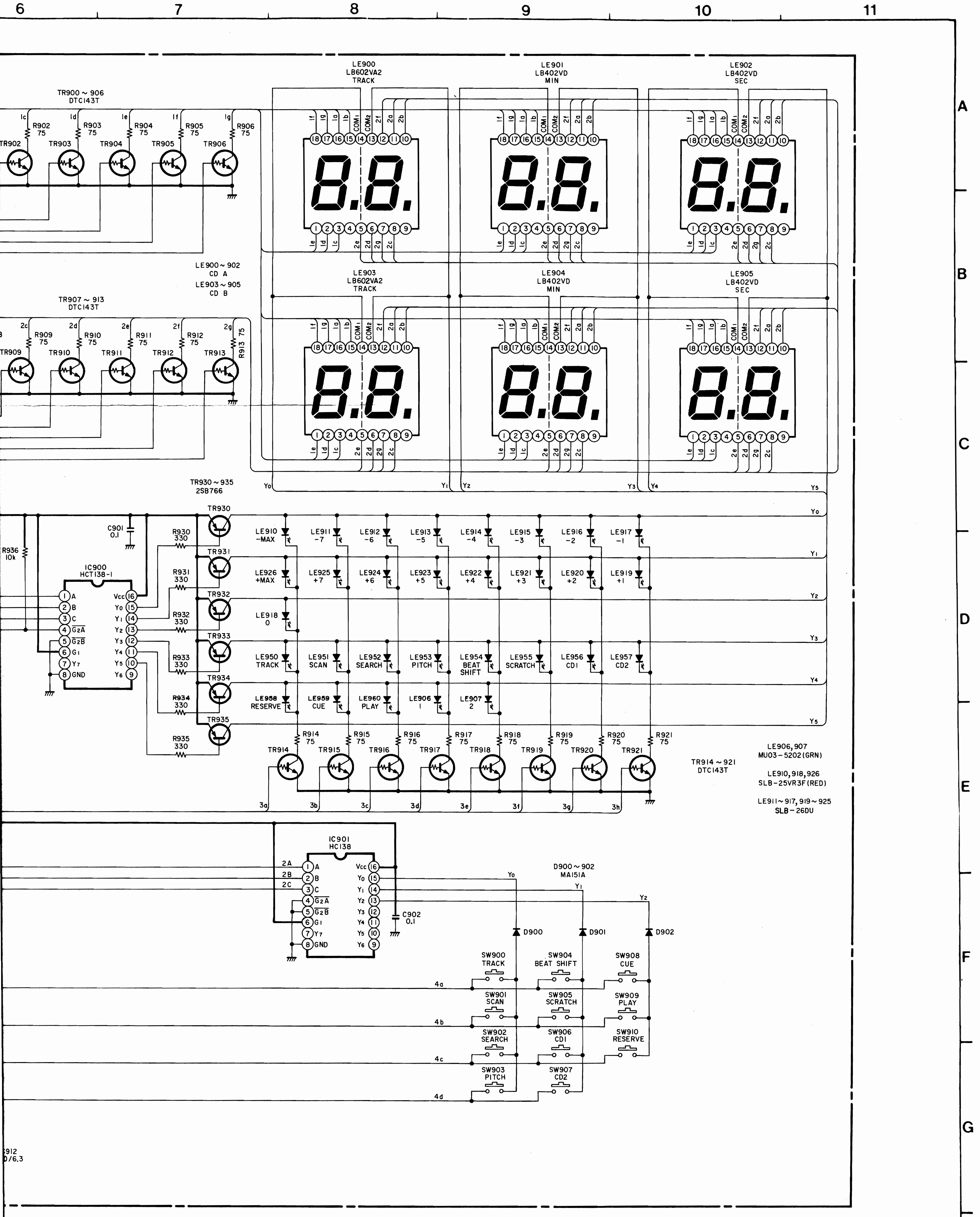

FG940A
GU-2242-2
LE1
LOADING MOTOR
OPEN CLOSE
2U-1644 MOTOR DRIVE UNIT
SLIDE MOTOR
IN SW.
KSS 240A PICK UP
CB7
CB2
CB4
CB3
CB1
GU-2242-1
CB5
CB6
FG940A
GU-2242-2
LE1
LOADING MOTOR
OPEN CLOSE
2U-1644 MOTOR DRIVE UNIT
SLIDE MOTOR
IN SW.
KSS 240A PICK UP
CB7
CB2
CB4
CB3
CB1
GU-2242-1
CB5
CB6
CB706 (BLK)
CB704 (BLK)
CB705 (BLU)
CB703 (BLU)
CC702 (BLK)
4
CB702 (WHT)
CB701
POWER SW.
GU-2244-1
※(GU-2340-1)
CB723 (RED)
GU-2244-7
※(GU-2340-7)
CB724 (BLU)
CB700
AC 120V 60Hz
※(AC240V 50Hz
AC220V 50Hz
AC120V 50Hz)
CB722 (WHT)
GU-2244-6
※(GU-2340-6)
CB708
L
R
LINE OUT 1
L
R
LINE OUT 2
GU-2244-2
※(GU-2340-2)
GU-2244-3
※(GU-2340-3)
CC709
8
CB709 (RED)
EJECT 1 SW.
CB710 (WHT)
SW700
CC710
CC711
CB711 (RED)
EJECT 2 SW.
SW701
CB707
GU-2244-4
※(GU-2340-4)
GU-2244-5
※(GU-2340-5)
RC33
CB802
CB900
40
CB800
GU-2248-3
CB801
SW800
GU-2248-1
GU-2248-2

※( ) = Asia Only

SCHEMATIC DIAGRAM


1
2
3
4
5
6
GU-2248-2
GU-2248-1
GU-2248-3
SW800
SRGF
ROTARY SWITCH
CC801
CB801
CB802
CB800
CB900
L800
L801
C803 0.1
C820 330/6.3
J1
F.G.
(+5V)
(0V)
R800 10k
R801 10k
R802 1k
R803 1k
C800 220p
C801 220p
C812 0.1
IC807 LS74
IC802 HC373
IC803 HC373
C809 0.1
C810 0.1
IC805 SN75179BP
R804 100
C802 0.1
R809 2.7k
R810 5.6k
C822 3.3/50
X800 CST12.0M
C806 0.1
C805 0.1
IC800 μPD78233
C804 0.1
IC808 μPD6254
IC801 HC373
C807 0.1
C808 0.1
IC804 27C256
R808 22k
R807 22k
R806 22k
R805 22k
D800
D801
D802
D803
D800~803 MA151A
C811 0.1
C821 330/6.3
TR900 ~ 906 DTC143T
R900 75
R901 75
R902 75
R903 75
TR900
TR901
TR902
TR903
TR904
TR907 ~ 913 DTC143T
R907 75
R908 75
R909 75
R910 75
TR907
TR908
TR909
TR910
TR911
R936 10k
C901 0.1
IC900 HCT138-I
C900 0.1
C910 100/6.3
C911 100/6.3
C912 100/6.3

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P
EACH VOLTAGE AND CURRENT ARE MEASURED
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE


6
7
8
9
10
11
A
B
C
D
E
F
G
H
TR900 ~ 906
DTC143T
R902 75
R903 75
R904 75
R905 75
R906 75
TR902
TR903
TR904
TR905
TR906
LE900
LB602VA2
TRACK
LE901
LB402VD
MIN
LE902
LB402VD
SEC
LE900 ~ 902
CD A
LE903 ~ 905
CD B
LE903
LB602VA2
TRACK
LE904
LB402VD
MIN
LE905
LB402VD
SEC
COM1
COM2
TR907 ~ 913
DTC143T
R909 75
R910 75
R911 75
R912 75
R913 75
TR909
TR910
TR911
TR912
TR913
TR930 ~ 935
2SB766
TR930
TR931
TR932
TR933
TR934
TR935
C901
0.1
R936
10k
R930 330
R931 330
R932 330
R933 330
R934 330
R935 330
IC900
HCT138-1
Vcc
GND
LE910 -MAX
LE911 -7
LE912 -6
LE913 -5
LE914 -4
LE915 -3
LE916 -2
LE917 -1
LE926 +MAX
LE925 +7
LE924 +6
LE923 +5
LE922 +4
LE921 +3
LE920 +2
LE919 +1
LE918 0
LE950 TRACK
LE951 SCAN
LE952 SEARCH
LE953 PITCH
LE954 BEAT SHIFT
LE955 SCRATCH
LE956 CD1
LE957 CD2
LE958 RESERVE
LE959 CUE
LE960 PLAY
LE906 1
LE907 2
R914 75
R915 75
R916 75
R917 75
R918 75
R919 75
R920 75
R921 75
TR914
TR915
TR916
TR917
TR918
TR919
TR920
TR921
TR914 ~ 921
DTC143T
LE906, 907
MU03-5202 (GRN)
LE910, 918, 926
SLB-25VR3F (RED)
LE911 ~ 917, 919 ~ 925
SLB-26DU
IC901
HC138
C902
0.1
D900 ~ 902
MA151A
D900
D901
D902
SW900 TRACK
SW904 BEAT SHIFT
SW908 CUE
SW901 SCAN
SW905 SCRATCH
SW909 PLAY
SW902 SEARCH
SW906 CD1
SW910 RESERVE
SW903 PITCH
SW907 CD2
4a
4b
4c
4d
912
0/6.3
+B LINE

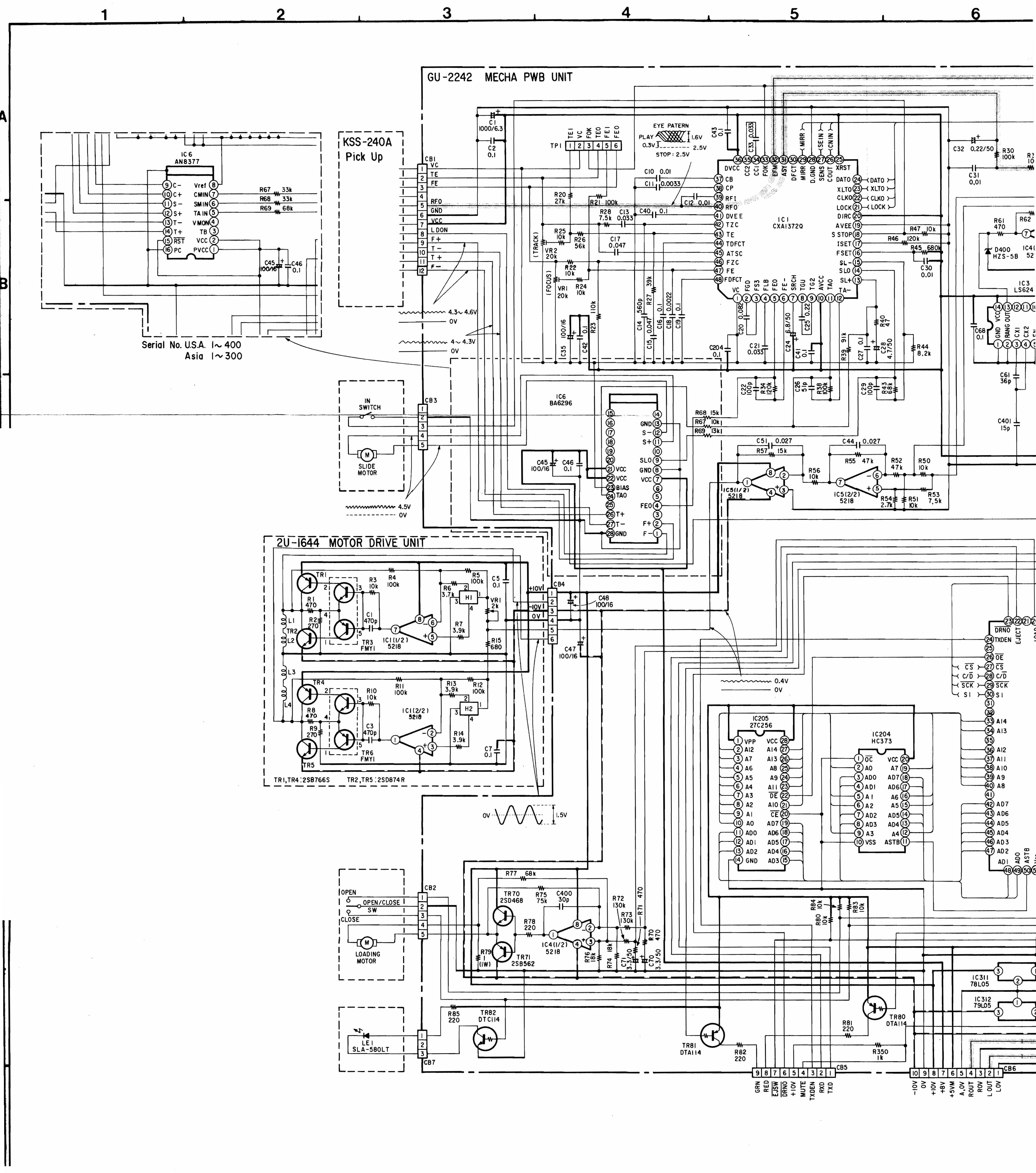
LUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
D CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
S ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (MECHA UNIT)

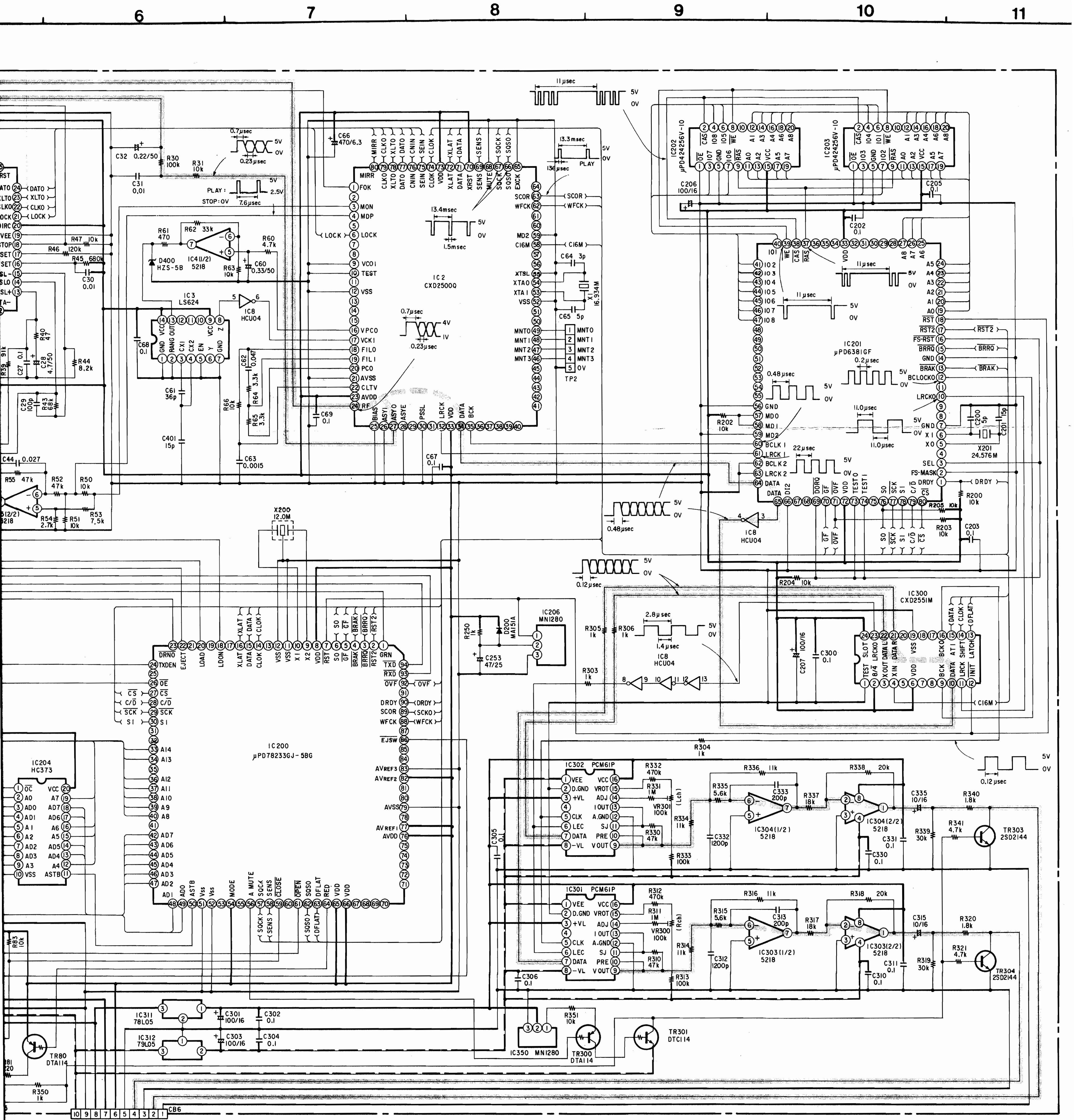

1
2
3
4
5
6
A
B
GU-2242 MECHA PWB UNIT
KSS-240A Pick Up
IC6 AN8377
Serial No. U.S.A. 1~400
Asia 1~300
IC1 CXA1372Q
EYE PATERN
PLAY
STOP : 2.5V
IC6 BA6296
IN SWITCH
SLIDE MOTOR
2U-1644 MOTOR DRIVE UNIT
TR1,TR4:2SB766S TR2,TR5:2SD874R
IC1(1/2) 5218
IC1(2/2) 5218
IC5(1/2) 5218
IC5(2/2) 5218
IC3 LS624
D400 HZS-5B
IC205 27C256
IC204 HC373
OPEN/CLOSE SW
LOADING MOTOR
TR70 2SD468
TR71 2SB562
IC4(1/2) 5218
LE1 SLA-580LT
TR82 DTC114
TR81 DTA114
TR80 DTA114
IC311 78L05
IC312 79L05
CB1
CB2
CB3
CB4
CB5
CB6
CB7
GRN RED EJSW DRNO +10V MUTE TXDEN RXD TXD
-10V 0V +10V +8V +5VM A,0V ROUT R0V L OUT L0V
4.3~4.6V
4~4.3V
4.5V
0.4V
1.5V
0V

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNA
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PR


6
7
8
9
10
11
IC2
CXD2500Q
IC3
LS624
IC4(1/2)
5218
IC8
HCU04
D400
HZS-5B
X1
16.934M
TP2
IC202
μPD424256V-10
IC203
μPD424256V-10
IC201
μPD6381GF
X201
24.576M
X200
12.0M
IC206
MN1280
D200
MA151A
IC200
μPD78233GJ-5BG
IC204
HC373
IC300
CXD2551M
IC302 PCM61P
IC301 PCM61P
IC304(1/2)
5218
IC304(2/2)
5218
IC303(1/2)
5218
IC303(2/2)
5218
TR303
2SD2144
TR304
2SD2144
IC311
78L05
IC312
79L05
IC350 MN1280
TR300
DTA114
TR301
DTC114
TR80
DTA114
R350
1k
CB6
-10V
0V
+10V
+8V
+5VM
A.0V
ROUT
R0V
LOUT
L0V
11μsec
13.3msec
PLAY
0.7μsec
0.23μsec
PLAY:
STOP:0V
7.6μsec
13.4msec
1.5msec
0.48μsec
0.12μsec
2.8μsec
1.4μsec
22μsec
11.0μsec
0.2μsec
(Lch)
(Rch)

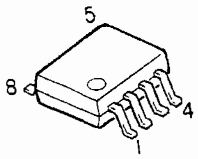
+B LINE
-B LINE
SIGNAL LINE

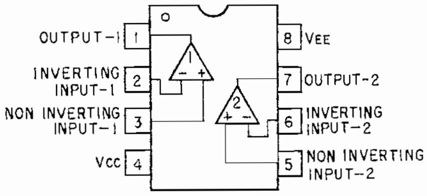
ALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
D CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
S ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

SEMICONDUCTORS

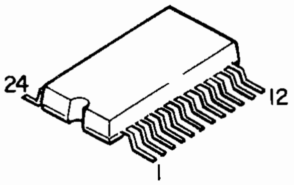
● IC'S

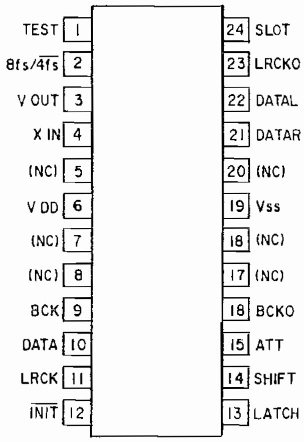
M5218FP (IC1)
BA15218F
(IC4,5,303,304)



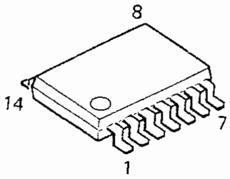

OUTPUT-1 1
INVERTING INPUT-1 2
NON INVERTING INPUT-1 3
Vcc 4
8 VEE
7 OUTPUT-2
6 INVERTING INPUT-2
5 NON INVERTING INPUT-2
1
2

CXD2551MT
(IC300)

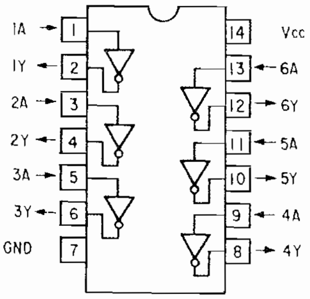



TEST 1
8fs/4fs 2
V OUT 3
X IN 4
(NC) 5
V DD 6
(NC) 7
(NC) 8
BCK 9
DATA 10
LRCK 11
INIT 12
24 SLOT
23 LRCKO
22 DATAL
21 DATAR
20 (NC)
19 Vss
18 (NC)
17 (NC)
16 BCKO
15 ATT
14 SHIFT
13 LATCH

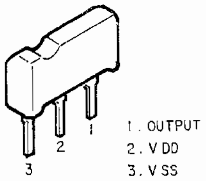
TC74HCU04AF (IC8)
SN74LS624NSR (IC3)
HD74LS74AFP-TL (IC807)



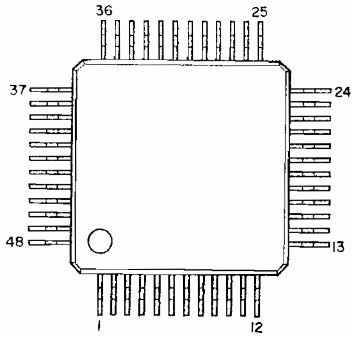
TC74HCU04AF

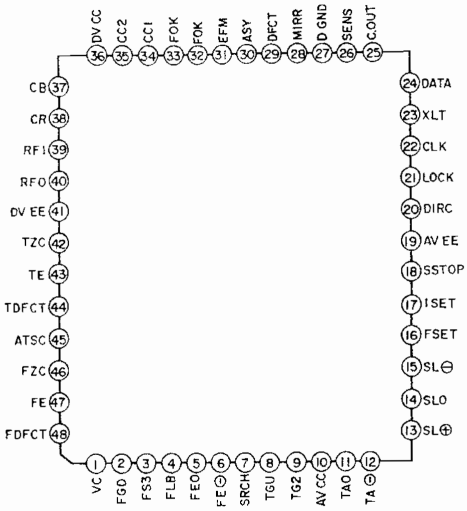

1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

MN1280S
(IC206, 350)

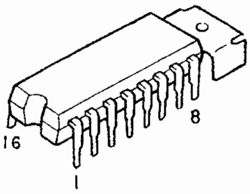

1
2
3
1. OUTPUT
2. V DD
3. V SS

CXA1372Q
(IC1)

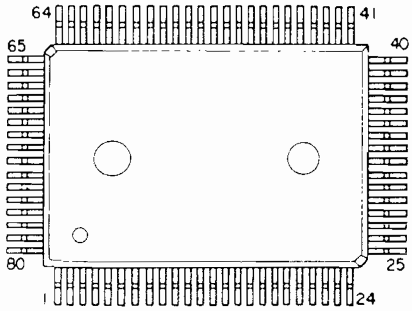

36
25
37
24
48
13
1
12


DV CC 36
CC2 35
CC1 34
FOK 33
FOK 32
EFM 31
ASY 30
DFCT 29
MIRR 28
D GND 27
SENS 26
C.OUT 25
24 DATA
23 XLT
22 CLK
21 LOCK
20 DIRC
19 AV EE
18 SSTOP
17 ISET
16 FSET
15 SL⊖
14 SLO
13 SL⊕
CB 37
CR 38
RF1 39
RFO 40
DV EE 41
TZC 42
TE 43
TDFCT 44
ATSC 45
FZC 46
FE 47
FDFCT 48
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE⊖
7 SRCH
8 TGU
9 TG2
10 AV CC
11 TAO
12 TA⊖

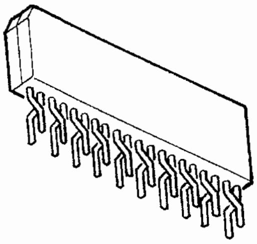
AN8377N
(IC6)



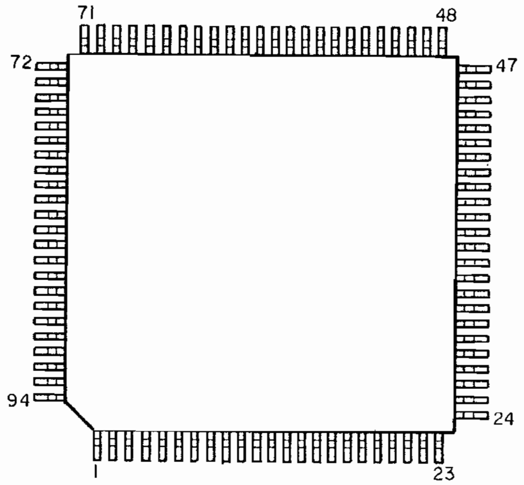
CXD2500Q (IC2)
UPD6381GF (IC201)


64
41
65
40
80
25
1
24

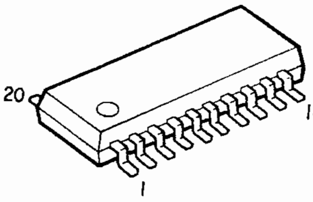
UPD424256V-10
(IC202, 203)



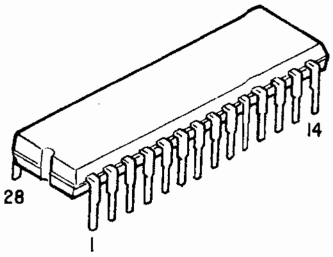
UPD78233GJ-5BG (IC200)
MPD78233 (IC800)


71
48
72
47
94
24
1
23

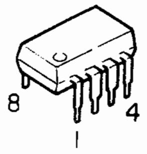
HD74HC373FP-TL
(IC204,801,802,803)



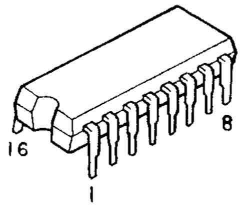
HN27C256G
(IC205,804)



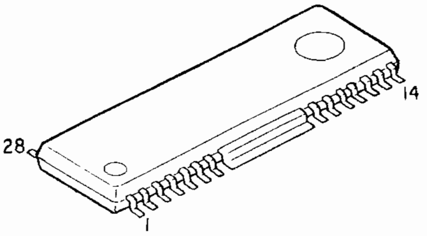
SN75179BP
(IC805)



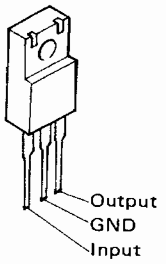
PCM61P-L (IC301, 302)
TC74HC138AP (IC901)
M74HCT138-1FP (IC900)
M5M34051P (IC705)



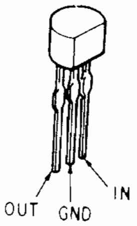
BA6296 FP-T1
(IC6)



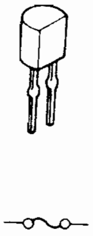
NJM7805FA
(IC703, 704)


Output
GND
Input

NJM78L05AT (IC311)
NJM79L05AT (IC312)

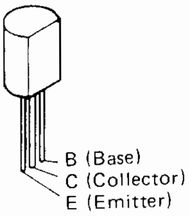


ICP-N38T
(IC700, 701, 702)

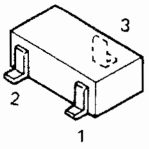


● TRANSISTORS

2SB562(C) (TR71)
2SD468(C) (TR70)

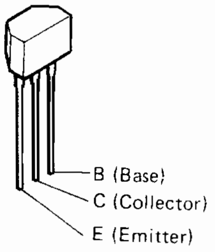

B (Base)
C (Collector)
E (Emitter)

DTC143TKT96 (TR900 ~ 921)
DTC114EKT96 (TR082, 301)



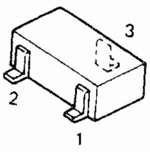
1: GND/Emitter
2: In/Base
3: Out/Collector

2SD2144STPU
(TR302, 303)

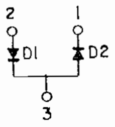

B (Base)
C (Collector)
E (Emitter)

● DIODES

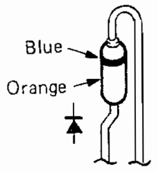
MA151A
(D200)



1: Anode
2: Cathode
3: Anode / Cathode

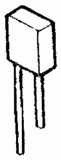


1SR35-200A
(D704 ~ 711)

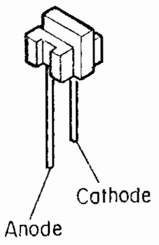

Blue
Orange

● LED

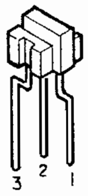
SLB-25VR3F (RED)
(LE910, 918, 926)



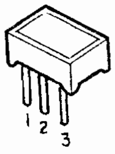
SLB-26VR (RED)
(LE702, 703)
SLB-26DU (ORG)
(LE911 ~ 917, 919~925)


Cathode
Anode

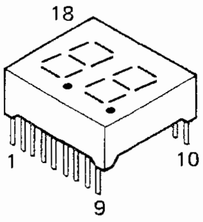
SPB-26
(LE700,701)



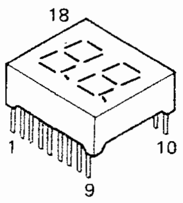
MU03-5202 (GRN)
(LE906, 907)



LB-602VA2 (LE900, 903)



LB-402VD
(LE901, 902, 904, 905)



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Printed in Japan 109 BU 0275